# THE "THROAT DISTEMPER" OF 1735-1740

PART II.

ERNEST CAULFIELD

## VI

### MASSACHUSETTS

What mourning Sighs, and loud Out-cries,
comes from the Eastern Towns
Of Children crying, and others dying,
which makes a doleful Sound.
—A Lamentation.

Most of the old towns between Casco Bay and Boston were connected by a road which ran roughly parallel to the coast and far enough inland to avoid the many small inlets, marsh lands, and sandy dunes. A few weeks after the Kingston outbreak the disease invaded Kittery and Hampton Falls, two important trading centers along this road. From Kittery the infection was carried northward into Maine and from Hampton Falls southward across disputed territory into the Province of Massachusetts Bay. Amesbury[73] and Salisbury[74] were soon involved, and by September the epidemic had crossed the Merrimac River and like an invading army concentrated its forces at Newbury before it started down the old Bay Path towards Boston.

Newbury, which at that time included Newburyport, was only about ten miles south of Hampton Falls and the inhabitants must have heard about the New Hampshire epidemic, though it does not appear that they were aware of any direct relation. They could explain their own distress without reference to any sickness in the neighboring towns. During the previous summer there had been a plague of huge black caterpillars such as had never been seen before, and the leaves on the trees and bushes had been destroyed until the country-side was as barren as in winter. These caterpillars were indeed a nuisance: "No river or pond could stop them. They could swim like dogs, and travel in unaccountable armies and completely cover whole houses and trees. Cart and carriage wheels would be dyed green from the numbers they crushed in progress."

[73] *Boston News-Letter*, Oct. 2-9, 1735. D. W. Hoyt: *Old Families of Salisbury and Amesbury*. 1902, ii, 493, mentions numerous baptisms "By Reason of Dangerous Sickness" during August and September 1735. Most of the multiple deaths in the *Amesbury Vital Records*, however, occurred during 1736—see Clough, Currier, Fowler, Lowel, and Winget families.

[74] The only evidence of the distemper in Salisbury, as in a few other Massachusetts towns, is the finding of multiple deaths in the *Vital Records*; see Eaton, Flanders, French, and Hook families.

After an effective Sunday sermon the caterpillars disappeared, but it was thought that the myriads of decomposing carcasses had infected the air and caused the epidemic. There is an anecdote, a little more weird, in the diary of Stephen Jacques:[75]

Thursday, Oct 29th. My wife went into a chamber, that was locked, to fetch candels, that was in a bushel under a bed, and as she kneeled down and took her candels and laid them on the bed and thrust back the half bushel, there came out a child's hand. She saw the fingers, the hand, a streked boy's cote or sleeve, and upon sarch there was no child in the chamber. On Thursday a fortnite after, my Steven's son Henry died. The next Thursday Ebenezer died. The next Monday morning his eldest son Stephen died.

At first, the disease did not cause much concern and it was reported[76] that "there is but six that have died within a Week, and the rest that are sick are likely to recover." That was written in the autumn, but before the winter was over the epidemic spread throughout the town and there were over one hundred deaths between September and the last of December, 1735.[77] Eighty-one children died on Chandler's Lane (Federal Street) alone. Multiple deaths were numerous.[78] The deaths of the eight Boynton children have been mentioned, but when four of them were buried in a single grave, even the New York newspapers noted the event and remarked:—"the like sorrowful Instance seldom known in this part of the world."[79]

Dr. John Fitch (1709-1736), son of the Rev. Jabez Fitch of Portsmouth, was a practising physician in Newbury at this time. After his graduation from Harvard College (1728), he studied under Dr. Nathaniel Sargeant of Hampton and later settled in Newbury where his medical talents and exceptional character were gratefully appreciated. When the sickness first appeared he became intensely interested in its cause and treatment but after a tedious and trying year of practice, he, himself, contracted the disease and died—one of the first American martyrs to science.

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[75] J. Coffin: *Hist. of Newbury*, p. 204; E. V. Smith: *Hist. of Newburyport*, p. 46.

[76] *Boston News-Letter*, Oct. 9-16, 1735.

[77] *Boston Evening Post*, Jan. 5, 1736.

[78] *Newbury Vital Records*: Bailey, Brown, Chase, Coffin, Dole, Emery, Fowler, Hale, Hodkins, Huse, Kelly, March, Merrill, Mors, Ordway, Pike, Rogers, and Sawyer families.

[79] *New York Gazette*, Jan., 1735/6.

He was happy in a very easy and pleasant natural Temper, polite in his Address, and virtuous in his whole Behaviour, which greatly recommended him to the good Opinion of all who were acquainted with him, and gained him the Affections of those with whom he conversed, so as to be extensively useful, particularly in the practice of Physick.

Tho' in the Distemper which has so long prevailed in these Parts, few Gentlemen of the Faculty had equal none greater success, yet it proved fatal to himself, for after a few Days Sickness in which from the first the Symptoms were violent and threatening, his natural infirm Constitution, yet more debilitated by his late excess in Business, yielded to the Distemper, in the 27th Year of his Age; by whose Death, tho' we trust it was gain to himself, the Publick hath sustained an heavy Loss, and accordingly it is greatly lamented.[80]

Byfield, a parish of about eighty-five families in the southwest part of Newbury, also became involved in the autumn of 1735, and within a year there were over a hundred deaths, which was said to have been more than a seventh of the total population.[81]

For a time it seemed that Rowley, a few miles south of Newbury on the Bay Path, would escape a serious epidemic. There were occasional multiple deaths during the winter of 1735-36, mostly in that part of the town that was close to Byfield, and by spring it was supposed that the distemper had abated throughout the "Eastward." This was only an apparent calm, for on the first day of summer, two-year-old John Plumer, of the second parish, died—"the first child that died in this parish of y$^{e}$ sore sickness of which great numbers have died in Neighbour Parishes"—and for the next six or eight months the epidemic spread with its usual violence.[82] In the second parish, where there had been less than eight deaths annually, forty-six children died, and it has been estimated that in Rowley and neighboring parishes, two hundred, or one-eighth of the total population, died during the first year of the sickness.[83]

[80] *Boston Gazette*, Nov. 1-8, 1736; *Boston News-Letter*, Oct. 28-Nov. 4, 1736.

[81] *Boston News-Letter*, Oct. 14-18, 1736; Morse and Parish: *Compendious Hist. of New Engl.*, p. 329.

[82] *Rowley Vital Records*: Multiple deaths in the Adams, Blaisdel, Brocklebank, Chaplin, Cheney, Clark, Cooper, Dickinson, Easty, Gerrish, Goodridge, Harriman, Hazzen, Hidden, Jackman, Johnson, Lunt, Moody, Northend, Noyse, Palmer, Pearson, Perley, Pingree, Russell, Saunders, Steward, Stickney, Tenney, Thurlow, Turner, Wallingford, Wheeler, and Woodman families. More multiple deaths in three branches of the Cressey Family—*New Engl. Hist. & Geneal. Reg.*, April, 1877, 201.

[83] Gage: *Hist. of Rowley*. 1840, pp. 430, 432.

There are no clinical descriptions available, but there is good reason to believe that the disease in Newbury, Byfield, and Rowley was diphtheria, or the same that was present in New Hampshire. The very high death-rate and the frequency of multiple deaths are the two outstanding characteristics that differentiate it from scarlet fever, at least from the type of scarlet fever that was prevalent at that time. In Ipswich, however, the history of the epidemic is somewhat confusing and in the absence of detailed descriptions only a tentative diagnosis can be made. In April 1736, the *Boston News-Letter* reported:

'Tis said, the Distemper is abated at the Eastward; . . . 'Tis also said, that several have lately died of a Scarlet Fever at Ipswich and other Places.

The *Ipswich Vital Records* show that Michael Farley lost five children in April, 1736, four of them in one week, and during the next two years numerous families lost three or four children apiece.[84] The family records of Mark and Hephzibah How, in particular, reveal definite evidence of a malignant contagious disease:

| | | | | |
|---|---|---|---|---|
| Lucy | died | November | 5, | 1736 |
| Mary | " | " | 15, | " |
| Aaron | " | " | 18, | " |
| Hannah | " | " | 18, | " |
| Abijah | " | " | 21, | " |
| Mark | " | " | 24, | " |
| Love | " | " | 28, | " |
| Moses | " | " | 28, | " |

It was said that John Abbott, a neighbor, also lost eight children about the same time and that Nathaniel Cross lost seven during one month in 1738.[85] From a superficial consideration of these brief facts it appears that scarlet fever was the prevailing disease in Ipswich. During 1736, scarlet fever was present in a number of other Massachusetts towns and from the date of the *News-Letter* item (April 15-22, 1736) one may surmise that the Ipswich scarlet fever was a part of the same epidemic that had been present in Boston for the previous six months. But the Ipswich records show

[84] *Ipswich Vital Records*: Two or more deaths in the Abbe, Appleton, Baker, Bennet, Boardman, Brown, Burnam, Choate, Fuller, Gibson, Hart, Heard, Jackson, Jewet, Kimball, Knowlton, Lull, Neland, Pierce, Pottar, Safford, Shatchwell, Sherwin, Smith, Treadwell, Trucker, and Webber families.

[85] *Boston News-Letter*, Dec. 2-9, 1736. *New York Gazette*, Feb. 21-28, 1737/8. Felt: *Hist. of Ipswich, Essex, and Hamilton*, p. 338.

many multiple deaths which are difficult to explain unless it is assumed that scarlet fever in Ipswich was a great deal more malignant than in any other town. I believe that the Ipswich records are more satisfactorily explained in another way. While the scarlet fever epidemic was spreading out from Boston the diphtheria epidemic was descending from the north, and in Essex county they travelled along the old Bay Path at the very same time but in opposite directions. It is not necessary to assume that there was only one disease in Ipswich. Indeed, if diphtheria was epidemic in almost every little town to the north of Ipswich, it was probably present in Ipswich too, because the Ipswich epidemic has the same characteristics as the epidemic in the other northern towns. Although scarlet fever may have caused many deaths during 1736, I believe that the Farley, How, Abbott, and Cross children died from diphtheria, the more malignant of the two diseases, or possibly from a combination of the two. That the How children, at least, died of diphtheria is suggested by the town records which state that they died of "cancre quinsy"—an eighteenth century term for laryngeal obstruction.[86]

There is evidence of the distemper at Wenham (1737),[87] Beverly (1736-37),[88] and Salem (1736-37);[89] in the brief facts concerning Marblehead conclusive proof of two separate epidemics can be found. According to the *New York Gazette*, in August, 1737, when the pestilence was at its height in Marblehead, forty-five deaths occurred within fifteen days. "It seems to be a very unaccountable Distemper, no Medicines, which have as yet been apply'd, have any Efficacy to remove, or so much as ease the Patients . . ." This was more than a year after the Boston epidemic and, since Marblehead was only fifteen miles from Boston, some of the physicians, if at all worthy of the name, must have tried the same treatment that had been used in Boston during the previous year with such remarkable success. William Douglass, who went to Marble-

[86] D. W. Howe: *Howe Genealogies*. 1929, p. 170.

[87] *New York Gazette*, Feb. 21-28, 1737. *Essex Antiquarian*, vii, 108. Multiple deaths in Batchelder, Dodge, and Patch families. See illustration of the Gott family tombstones. Allen: *Hist. of Wenham*. 1860, p. 127.

[88] *Beverly Vital Records*: Multiple deaths in Conant, Cox, Patch, Smith, Stone, and Trask families. Hall's List of Deaths in Beverly in *Hist. Coll. Essex Inst.*, v, 16. *Boston News-Letter*, Jan. 22-27, 1737.

[89] See illustration of Henchman's Prospectus—the Rev. J. Chipman's report of the north precinct of Salem. *Salem Vital Records*: Judith Pickman.

head to observe the epidemic, still insisted that the high mortality was the result of improper therapy, but in his ingenious explanation he unconsciously solves the mystery and establishes the diagnosis. He said that the first Marblehead epidemic in 1736 was accompanied by "the Eruptive Fever & very few died but their 2d seizure 1737 had no miliary eruption & bad regimen and proved very mortal."[90] In other words, the comparatively mild scarlet fever had spread from Boston to Marblehead on its way up the road to Ipswich in 1736, and the malignant diphtheria epidemic had come down the road from Newbury, Ipswich, and other places and reached a peak in Marblehead during 1737. Douglass' brief description of the Marblehead events cannot be explained by either scarlet fever or diphtheria alone, and so the very man upon whose word many historians rely for a diagnosis of the "throat distemper" was mistaken in his belief that it was caused by one disease.

The infection may have spread to Gloucester, near the tip of Cape Anne, along the road from either Beverly or Ipswich. There is some evidence of the distemper in 1736, but the real epidemic there was in 1738.[91] In a memorial to the General Court, the people of Sandy Bay mentioned that they had lost "thirty-one of their pleasant children by death,"[92] and as there were only twenty-seven families at Sandy Bay, this was probably more than a third of all their children. It is apparent that if the "Scarlet Fever at Ipswich and other Places" was no more severe than that in Boston, it was not an epidemic of scarlet fever at Sandy Bay.

The Gloucester records illustrate another feature of the epidemic, and that is the frequent recurrences of deaths in various branches of certain families. Between March 5 and July 21, 1738, there were four deaths in each of three different branches of the Pool family.[92] In other towns, the Boynton, Cressey, Howe, Lock, and Moulton families had multiple deaths in various branches. William Douglass noted that "in some family constitutions it is generally mortal in others very favourable." But one cannot determine from the records whether this feature should be attributed to family susceptibility, to intimate contact, or to the presence of healthy carriers.

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[90] *Coll. New York Hist. Soc. for 1918.* N. Y., 1919, p. 196. *Marblehead Vital Records*: Multiple deaths in Norwood, Paramore, Roundey, and Wills families.

[91] *Gloucester Vital Records*: Boynton, Harris, and Pool families.

[92] J. J. Babson: Hist. of Gloucester. 1860, p. 335.

As a general rule, the diphtheria epidemic spread from one town to the next because there was far more communication between neighboring towns than between distant towns, yet there were many exceptions to this rule. Kittery became infected long before its neighboring towns and the disease was also carried directly from Exeter to Boston, although the How case was not the cause of an epidemic. During the spring of 1736, the disease was very prevalent throughout New Hampshire and northeastern Massachusetts, and after this time it is impossible to determine the source of infection for any particular town. Marblehead, for instance, may have received its initial diphtheria infection from Ipswich or Newbury or even from some New Hampshire town. The Massachusetts "throat distemper" was complicated enough by the presence of two separate epidemics, but when it became still more complicated by the unrestricted travel of countless healthy carriers, a detailed explanation of any local epidemic can only be conjectural. Nevertheless, in one or two instances the available records allow some interesting speculation. For example, away off in a little frontier settlement at Dudley, which is fifteen miles south of Worcester, a tragedy occurred in the family of Benjamin and Martha Conant:[93]

| | | | |
|---|---|---|---|
| Abigail | died | December | 29, 1736 |
| John | " | January | 5, 1736/7 |
| Benjamin | " | January | 6, 1736/7 |
| Asa | " | January | 7, 1736/7 |
| Ebenezer | " | January | 8, 1736/7 |

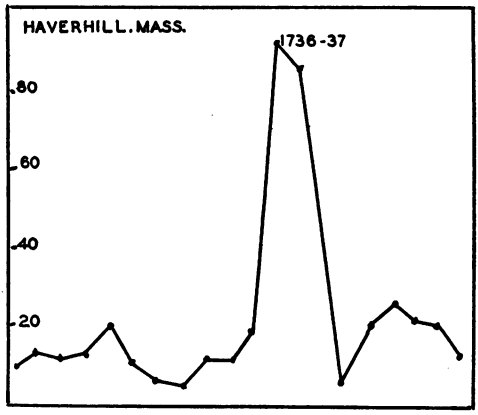
Now there is no other definite evidence of the "throat distemper" in the vicinity of Dudley before 1740-41,[94] and yet these records are so strikingly similar to the records of the "Eastward" towns that there is a temptation to conclude that these children died from diphtheria. If so, how did they get the disease? Dudley was a very small settlement; in fact, Benjamin Conant, the father of these children, was one of the original settlers. There were very few children in the town and certainly no epidemic in 1736, and so it is improbable that these children became infected at church or school or play. There is another and better explanation. Benjamin Conant

[93] *Dudley Vital Records.*

[94] Ibid.: Multiple deaths in Bracket, Davis, Howe, Newell, and Thomson families during 1740-41.

originally migrated from Beverly where the "throat distemper" raged during the summer and autumn of 1736, and among the victims were four children of Jonathan Conant, who was related to the Dudley settlers.[95] Therefore, although it is usually hazardous to draw any conclusions from isolated occurrences of multiple deaths, the Dudley episode can be readily explained on the assumption that some member of the Conant family was a diphtheria carrier.

While the diphtheria epidemic was spreading along the Bay Path, another epidemic appeared in Massachusetts directly south of Kingston. There was an old road leading from the Great Pond into Haverhill, about fifteen miles away, and the epidemic may have travelled along this road, though it is also possible that it travelled by way of Amesbury or Newbury and reached Haverhill from the east. This second course may explain the delay, for the Haverhill epidemic did not begin until nearly six months after the Kingston outbreak. At that time, Haverhill consisted of three parishes with a total of about twelve hundred people[96] and, according to the *Vital Records*, which are somewhat incomplete, there had been about ten deaths a year since 1725. The epidemic began in November, 1735, and among the first victims were two of the Whittier children. Although slow in starting, it raged violently for the next two years and Haverhill suffered more than any other Massachusetts town. During 1736 there were 116 deaths, and 130 more during 1737; ninety-eight per cent were under twenty years of age.




Haverhill, Mass., deaths, 1725-1744. Compiled from vital records published by the Topsfield Historical Society, 1911.

[95] *Hist. Coll. Essex Inst.*, v, p. 16; *Hist. and Gen. of the Conant Family*, pp. 180-81.

[96] Estimated.

It was said that nearly every family was afflicted and that more than half of the Haverhill children died.[97] At least sixty families lost two or more children; some of them lost four or five apiece. Twenty-three families were left childless.

The history of these times in Haverhill centers around the Rev. John Brown (1696-1746). He was born in Little Cambridge (Brighton), attended Harvard College (1714), and later married Joanna, a descendant of the celebrated John Cotton. Brown went to Haverhill in 1719 on a salary of "£100, half in corn &c." His epitaph states that he was greatly esteemed for his learning, piety, and prudence, and that his death was justly lamented as a loss to his family, church, and country.[98] During the epidemic, in which he lost three children, he was tireless in his efforts to aid his unfortunate people.

In March, 1737, Daniel Henchman, a Boston bookseller, impressed with the researches of Jabez Fitch in New Hampshire and anxious to gather and publish the Massachusetts figures, sent out a questionnaire to the ministers of various Massachusetts towns. He stated in his prospectus:

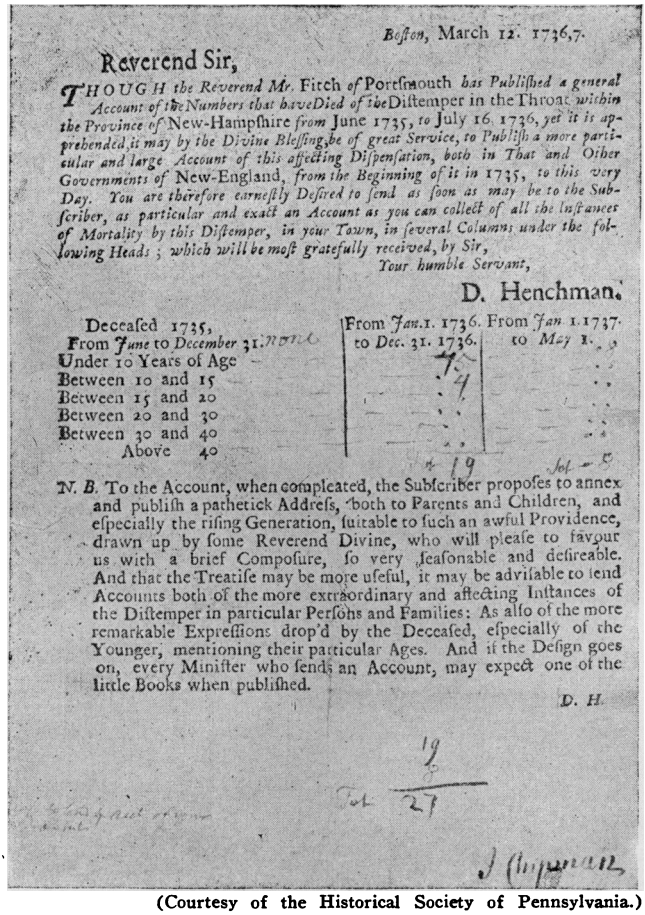
> To the Account, when compleated, the Subscriber proposes to annex and publish a pathetick Address, both to Parents and Children, and especially the rising Generation, suitable to such an awful Providence, drawn up by some Reverend Divine, who will please to favour us with a brief Composure, so very seasonable and desireable. And that the Treatise may be more useful, it may be advisable to send Accounts both of the more extraordinary and affecting Instances of the Distemper in particular Persons and Families: As also of the more remarkable Expressions drop'd by the Deceased, especially of the Younger. . . .

It is to be regretted that the statistical part of this contemplated work did not appear, but the plan materialized to some extent, for soon afterwards John Brown published a work that answers the requirements except that the material was confined to the Haverhill epidemic. *A Relation of some Remarkable Deaths among the*

[97] Chase: *History of Haverhill.* 1861, p. 306. If "more than half" of the children died, the minimum case fatality was over 50 per cent. Apparently most of the adults were immune. Provided some of the children were immune, the actual case fatality was probably over 70 per cent.

[98] *Coll. Mass. Hist. Soc., 2nd Ser.*, iv, p. 142.

*Children of Haverhil under the late Distemper in the Throat with an Address to the Bereaved*[99] was printed for Henchman in 1737 and must have been very popular because a second edition, with a



*Boston*, March 12. 1736,7.

Reverend Sir,

*THOUGH the Reverend Mr.* Fitch *of* Portsmouth *has Published a general Account of the Numbers that have Died of the* Distemper in the Throat *within the Province of* New-Hampshire *from* June 1735, *to* July 16. 1736, *yet it is apprehended it may by the Divine Blessing, be of great Service, to Publish a more particular and large Account of this affecting Dispensation, both in That and Other Governments of* New-England, *from the Beginning of it in* 1735, *to this very Day. You are therefore earnestly Desired to send as soon as may be to the Subscriber, as particular and exact an Account as you can collect of all the Instances of Mortality by this Distemper, in your Town, in several Columns; under the following Heads; which will be most gratefully received, by Sir,*

*Your humble Servant,*

D. Henchman.

| Deceased 1735, | From *Jan.* 1. 1736. to *Dec.* 31. 1736. | From *Jan.* 1. 1737. to *May* 1. |
|---|---|---|
| From *June* to *December* 31. | | |
| Under 10 Years of Age | | |
| Between 10 and 15 | | |
| Between 15 and 20 | | |
| Between 20 and 30 | | |
| Between 30 and 40 | | |
| Above 40 | | |

*N. B.* To the Account, when compleated, the Subscriber proposes to annex and publish a pathetick Address, both to Parents and Children, and especially the rising Generation, suitable to such an awful Providence, drawn up by some Reverend Divine, who will please to favour us with a brief Composure, so very seasonable and desireable. And that the Treatise may be more useful, it may be advisable to send Accounts both of the more extraordinary and affecting Instances of the Distemper in particular Persons and Families: As also of the more remarkable Expressions drop'd by the Deceased, especially of the Younger, mentioning their particular Ages. And if the Design goes on, every Minister who sends an Account, may expect one of the little Books when published.

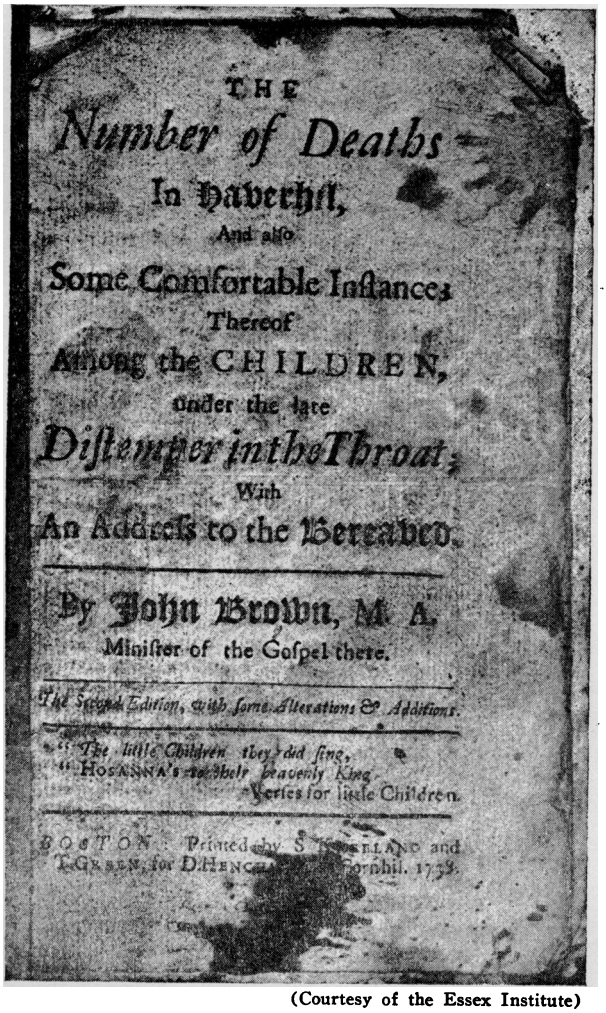
*D. H.*

(Courtesy of the Historical Society of Pennsylvania.)

slightly altered title, appeared in 1738 and was advertised for sale "by the dozen." It is a rare, curious, and morbid piece of literature and certainly would not be very popular at the present time, for it

[99] Title supplied by Dr. T. F. Capeles of Haverhill, who owns a complete copy of the first edition. Essex Inst. has a second edition. Incomplete editions in Amer. Antiq. Soc. and in Boston Pub. Library.

over-emphasizes the gruesome aspect of contemporary piety, the "remarkable Expressions" being the religious utterances of the feverish, delirious, and exhausted children on the approach of death. Nevertheless, the work is very valuable for in the numerous case histories Brown relates many items of medical interest:


THE
Number of Deaths
In Haverhil,
And alſo
Some Comfortable Inſtances
Thereof
Among the CHILDREN,
under the late
Diſtemper in the Throat;
With
An Addreſs to the Bereaved.
By John Brown, M. A.
Miniſter of the Goſpel there.
The Second Edition, with ſome Alterations & Additions.
"The little Children they did ſing,
"Hosanna's to their heavenly King.
Verſes for little Children.
BOSTON: Printed by S. KNEELAND and
T. GREEN, for D. HENCHMAN, in Cornhil. 1738.

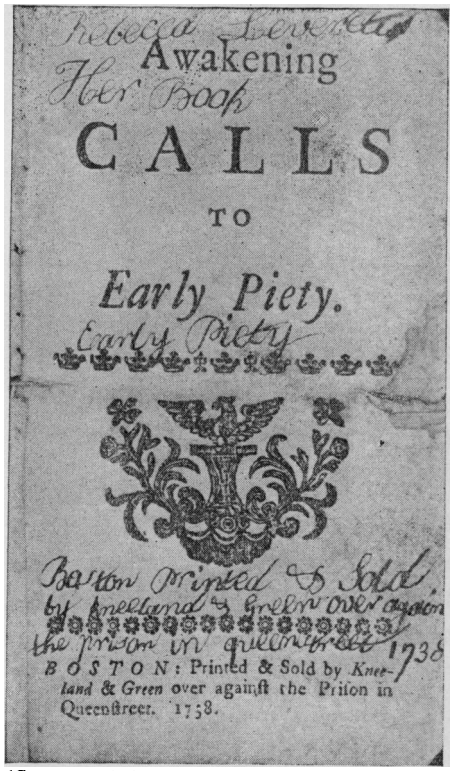
(Courtesy of the Essex Institute)

Mrs Betty Bailey, was a loving Companion, Ætat Fifteen, who with her Sister Mrs Molly Bailey, Ætat Thirteen, entered, were a desirable Couple, taken away from the Family of Col. Bailey, Esq. May 5 & 11, 1736, with a Scarlet Fever as well as the throat Distemper . . .

Brown was evidently aware that scarlet fever and "throat Distemper" were entirely separate diseases and as he does not mention scarlet fever in any other case it can be assumed that diphtheria was the prevailing sickness.

Sept 2 1736. Died Susannah Emerson. Aetat Ten. Saturday she complained of Indisposition, and her Mother telling her, She was afraid she was going to be sick, she cried and took on bitterly; but the next Day, when her Mother discovered the Canker in her Throat, she went away as composed as could be, and never said one word. . .

This case was cited as an excellent example of courage in the face of death, but aside from the sentimental aspect, it is the usual story of diphtheria. If the child had had malignant scarlet fever she would have become suddenly sick and a rash would have been immediately evident. That the laity looked for "Canker" in the throat and not for a rash on the body indirectly establishes the diagnosis of the Haverhill epidemic.


Awakening
Her Book
CALLS
TO
Early Piety.
Early Piety
BOSTON: Printed & Sold by Kneeland & Green over against the Prison in Queenstreet. 1738.

(Courtesy of the American Antiquarian Society.)

Other case histories explain the spread of the disease:

Died Susannah Emerson, Aetat Fifteen. They say she had been a sober little Girl all along, never inclined to be rude or proud as some Girls, but very timerous. Before she was sick, she had been tending a Family of sick Children . . . that all died of the Distemper, and was so much surprised at their Death that sometimes she was almost afraid to go across the Room, but when she her self was seized with *the Canker* exceeding bad, she was no ways distress'd about it, nor ever express'd regret for having been at the House, where in all probability she took the Distemper; . . .

. . . And one Sabbath-Evening, but two or three Days before he was taken sick, having been to visit a Child of his Sister H——th, that was in a dying State . . .

These are among the few instances throughout the whole epidemic where any idea of contagion was definitely expressed, but Brown relates other instances from which one may conclude that the notions of contagion were very vague:

Died Susannah Wilson Aetat Seven. After three or four Days Sickness, she gave away her Things to her Elder Sisters, & took the other children in her Arms and kiss'd them . . .

It would have been more "remarkable" if these children had escaped the disease.

The confused history of the Massachusetts epidemic is very well shown by comparing Haverhill with Boston. Both towns were the scenes of great distress during 1736 and to the unsuspecting reader it would seem that the same disease was the cause. But whereas an occasional case of scarlet fever complicated the diphtheria epidemic in Haverhill, in Boston this relation was reversed; Haverhill had abundant instances of multiple deaths in families, Boston few or none; the respective death and fatality rates were strikingly different; and at nearly the same time that about half of the Haverhill children were being carried to their graves, the Boston selectmen were jubilantly proclaiming through the newspapers "that scarce any Distemper, even the most favourable which has at any time prevailed so generally, has produced fewer Deaths."[100]

The *Vital Records* of Bradford,[101] Georgetown,[102] Topsfield,[103] and Wakefield,[104] reveal definite evidence of the distemper in 1736-37. When Andover (1738-39),[105] Middleton (1739),[106] and Lynn (1740),[107] became involved, the epidemic had covered practically all of Essex County, and fourteen hundred children had lost their lives.[108]

In 1738, when the epidemic was still raging in Maine and throughout Essex County, Massachusetts, with no indication of its letting up either in virulence or progress, a timely pamphlet of gruesome verse appeared. The author is unknown. Evans[109] attributes it to Hull Abbott (1702-1774), a minister at Charlestown, but this is undoubtedly an error for the initials "N. N." are found

[100] *Boston News-Letter*, Apr. 22-29, 1736.

[101] *Bradford Vital Records.* Multiple deaths in Carlton, Hardy, Jewet, Pearl, Sessions, Tenney, and Wood families.

[102] *Essex Antiquarian*, viii, p. 49. Multiple deaths in Blasdel, Brocklebank, Cooper, and Harriman families.

[103] *Deaths in Topsfield, Essex Inst. Hist. Coll.*, xxxviii, p. 129. Multiple deaths in Peabody, Perkins, Porter, Reddington, and Towne families.

[104] *Wakefield Vital Records.* Multiple deaths in Batt, Burnap, Damon, Parker, Stow, Swayn, and Wiley families.

[105] *Andover Vital Records.* Multiple deaths in Astin, Ballard, Blanchard, Carlton, Clark, Dane, Farrington, Foster, Fice, Lovejoy, Marble, and Peters families.

[106] *Middleton Vital Records.* Multiple deaths in How, Robinson, and Thomas families.

[107] *Zaccheus Collins Diary.* Ms. in Essex Inst., Lewis and Newhall: *Hist. of Lynn*, p. 325.

[108] *Essex Antiquarian*, 1897, i, p. 10.

[109] *Bibliography of American Literature.* No. 4214. The similarity in meter and theme of this poem to *A Lamentation* suggests the same authorship.

on the last page. Its dismal and melancholy theme continues for seventeen pages, but only a few verses are needed for illustration:

AWAKENING CALLS TO EARLY PIETY

The glorious God, hath cast abroad
his Anger on this Nation,
And dreadful Wrath, he kindled hath,
against this Generation.

* * *

Your Souls affair, Children take care,
you don't procrastinate;
O now begin, to turn from sin,
before it be too late.

* * *

O may this Call, awaken all
you Children to amend,
Your sinful Lives: O now be wise
and mind your latter end.

* * *

O sad Estate, yea Desperate
will your Condition be,
If you should be found in that day,
with God at enmity.

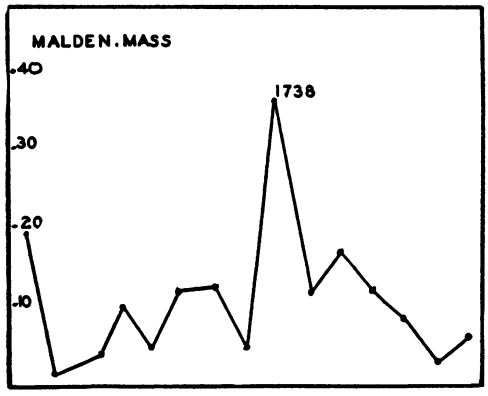
So soon as Death, hath stopt your Breath,
your Soul's must then appear
Before the Judge of quick and dead,
the Sentence there to hear.

From thence away, without delay,
you must be Doom'd unto,
A dreadful Hell, where Devils dwell,
in Everlasting woe.

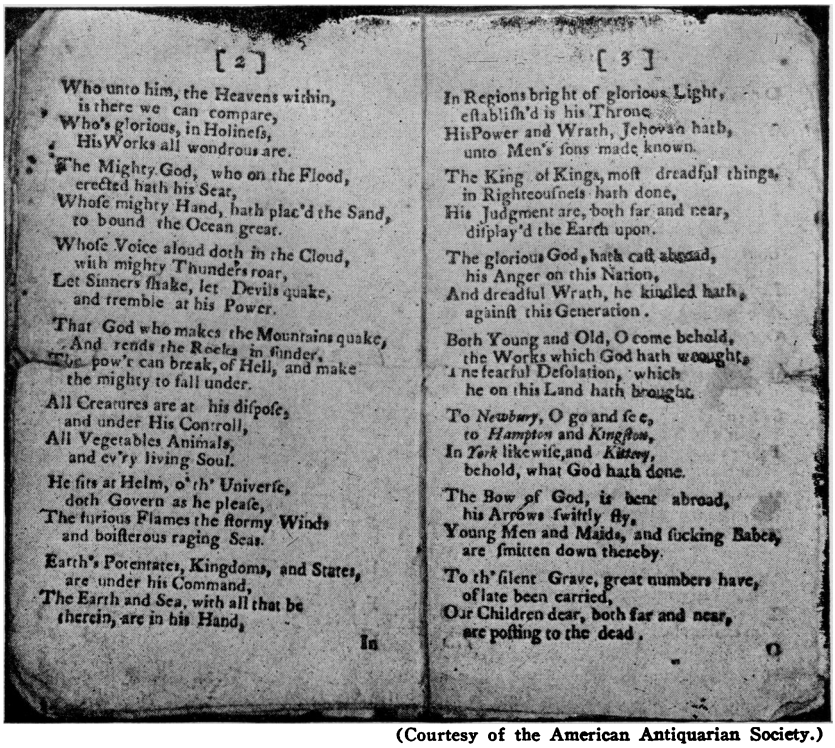
Where dreadful horrors, amazing terrors,
shall you encompass round,
Eternally, there you must ly,
in chains of darkness bound.

I' th' sulph'rous Lake, where direful flakes,
of Fire doth spread abroad,
Eternally, there kindled by,
the great Eternal God.

Although the "throat distemper" involved many towns outside of Essex County, only the records of a few of those towns are of particular interest. During the summer and autumn of 1738 there was a decided increase in deaths among the children of Malden, most of them in the Howard, Green, Paine, Sargant, and Upham families.[110] Samuel and Mary (Grover) Upham lost




Malden, Mass., deaths, 1730-1744. Compiled from records in the *New Engl. Hist. & Geneal. Reg.*, xii, 242; xiii, 70.



[ 2 ]

Who unto him, the Heavens within,
is there we can compare,
Who's glorious, in Holineſs,
His Works all wondrous are.

The Mighty God, who on the Flood,
erected hath his Seat,
Whoſe mighty Hand, hath plac'd the Sand,
to bound the Ocean great.

Whoſe Voice aloud doth in the Cloud,
with mighty Thunders roar,
Let Sinners ſhake, let Devils quake,
and tremble at his Power.

That God who makes the Mountains quake,
And rends the Rocks in ſunder,
The pow'r can break, of Hell, and make
the mighty to fall under.

All Creatures are at his diſpoſe,
and under His Controll,
All Vegetables Animals,
and ev'ry living Soul.

He ſits at Helm, o'r th' Univerſe,
doth Govern as he pleaſe,
The furious Flames the ſtormy Winds
and boiſterous raging Seas.

Earth's Potentates, Kingdoms, and States,
are under his Command,
The Earth and Sea, with all that be
therein, are in his Hand,

In

[ 3 ]

In Regions bright of glorious Light,
eſtabliſh'd is his Throne,
His Power and Wrath, Jehovah hath,
unto Men's ſons made known.

The King of Kings, moſt dreadful things,
in Righteouſneſs hath done,
His Judgment are, both far and near,
diſplay'd the Earth upon.

The glorious God, hath caſt abroad,
his Anger on this Nation,
And dreadful Wrath, he kindled hath,
againſt this Generation.

Both Young and Old, O come behold,
the Works which God hath wrought,
The fearful Deſolation, which
he on this Land hath brought.

To *Newbury*, O go and ſee,
to *Hampton* and *Kingſton*,
In *York* likewiſe, and *Kittery*,
behold, what God hath done.

The Bow of God, is bent abroad,
his Arrows ſwiftly fly,
Young Men and Maids, and ſucking Babes,
are ſmitten down thereby.

To th' ſilent Grave, great numbers have,
of late been carried,
Our Children dear, both far and near,
are poſting to the dead.

O

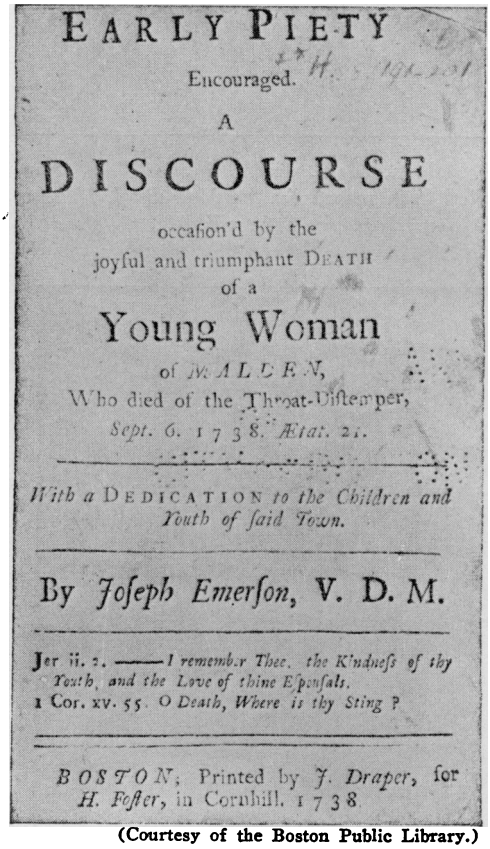
(Courtesy of the American Antiquarian Society.)

Pages from AWAKENING CALLS TO EARLY PIETY

[110] *New Engl. Hist. & Geneal. Reg.*, xii, 242; xiii, 70. Corey: *Hist. of Malden*, p. 639.

four, and on the occasion of the "joyful and triumphant Death" of Abigail, the Rev. Joseph Emerson preached his sermon on *Early Piety Encouraged.* Copies of this, and of a second sermon, are now very rare, but only a few lines in one of them have any medical importance:

Moreover, I must take the Freedom to exhort you also, to be helpful to your sick and afflicted Neighbours, as there may be Occasion. Let me tell you, it is an inordinate and sinful Fear that you have of the Distemper, if it keep you from going *nigh* your Neighbours, to tend up them, to *watch* with them, or in any other *Respect* to be helpful to them . . .


EARLY PIETY
Encouraged.
A
DISCOURSE
occasion'd by the
joyful and triumphant DEATH
of a
Young Woman
of MALDEN,
Who died of the Throat-Distemper,
Sept. 6. 1738. Ætat. 21.
With a DEDICATION to the Children and Youth of said Town.
By Joseph Emerson, V. D. M.
Jer ii. 2. ——I remember Thee, the Kindness of thy Youth, and the Love of thine Espousals.
1 Cor. xv. 55. O Death, Where is thy Sting?
BOSTON, Printed by J. Draper, for H. Foster, in Cornhill. 1738.

(Courtesy of the Boston Public Library.)

No doubt many Malden people thought that the disease was contagious. William Douglass went to Malden at the time of the epidemic and the diagnosis rests upon his account.[111] He found "no milliary Eruptions but a slow putrid fever" and ulcers in the throat. Douglass was aware that the Malden sickness had a different appearance from the Boston sickness of 1736, so it is more than probable that diphtheria was the cause of the Malden epidemic.

A note in the diary of the Rev. Samuel Dexter of Dedham[112] varies from the usual story concerning most of the Massachusetts towns:

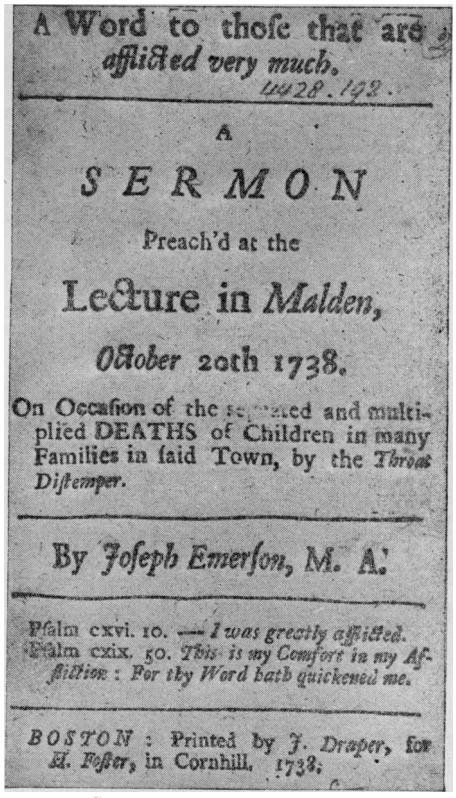
May 26th 1736. This day, a Sovereign, Righteous & Holy God took from us our fifth Son, William, a very Desireable Child, by yt Awfull Malady wch prevails in ye Country, & Another of my Children, vizt, Ebenezer, lay at

[111] *Coll. New York Hist. Soc. for 1918.* 1919, p. 196.
[112] *New Engl. Hist. & Geneal. Reg.*, 1860, xiv, 204.

y^e^ point of Death, w^m^ G^d^ graciously spar'd & Recover'd, & afterwards, I my self was Visited with it, & y^e^ most, if not all y^e^ family, tho' in moderation.

On account of the date, the proximity of Dedham to Boston, and the "moderation" of the disease, scarlet fever is the probable diagnosis.

There is not sufficient material to warrant separate descriptions, but there is evidence of the distemper in Braintree (1738-39),[113] Brookfield (1738),[114] Eastham (1736),[115] Grafton (1740),[116] Harvard (1739),[117] Lancaster (1740),[118] Lexington (1740),[119] Littleton (1740),[120] Lunenburg (1740),[121] Marlborough (1740),[122] Martha's Vineyard (1740),[123] Milton (1738),[124] Nantucket (1736),[125] Oxford (1740-41),[126] Reading (1736-37),[127] Sherborn (1736),[128] Shrewsborough (1740),[129] Southborough (1740),[130] Sutton (1740-41),[131] Uxbridge (1740-41),[132] Watertown (1737),[133] Westborough (1740),[129] Weston (1736 and 1739-40),[134] and Woburn (1738).[135] Some towns, Medford and Danvers for example, within the path of the epidemic seem to have escaped. I have found no evidence of the epidemic to the west of Worcester county.



A Word to thoſe that are afflicted very much.

A SERMON Preach'd at the Lecture in Malden, October 20th 1738.

On Occaſion of the ſe[illegible]ated and multiplied DEATHS of Children in many Families in ſaid Town, by the Throat Diſtemper.

By Joſeph Emerſon, M. A.

Pſalm cxvi. 10. — I was greatly afflicted. Pſalm cxix. 50. This is my Comfort in my Affliction: For thy Word hath quickened me.

BOSTON: Printed by J. Draper, for S. Foſter, in Cornhill, 1738.

(Courtesy of the Boston Public Library.)

[113] *New York Gazette*, Feb. 21-28, 1737/38. *Records of Town of Braintree* (1888): Samuel Pain lost five children in 1739.

[114] *Brookfield Vital Records*. Multiple deaths in Ashely, Gooddel, Goss, Heywood, and Hinds families.

[115] *New England Weekly Journal*, Nov. 2, 1736.

[116] *Grafton Vital Records*. Multiple deaths in Benjamin, Drury, Grover, Merriam, Pratt, and Smith families.

[117] Nourse: *Hist. of Harvard*, 1894, p. 515. Whitcomb and Witherbee families.

## VII

### A RELAPSE

And now again I send
mine Angel through the Land,
To visit you with sicknesses,
Which you cannot withstand.

—Earnest EXPOSTULATION.

The Boston scarlet fever epidemic quieted down near the end of 1736. During the next few years, William Douglass found

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[118] H. S. Nourse: *Birth, Marriage and Death Reg. of Lancaster*, p. 158. Moor and Snow families.

[119] *New Eng. Hist. & Geneal. Reg.*, 1858, xii, 267.

[120] *New England Weekly Journal*, July 29, 1740. "Eliz. only child of Samuel Dummer."

[121] *Lunenburg Vital Records.* Carlile and Heywood families.

[122] *Marlborough Vital Records.* Brigham, Stewart, and Taintor families. (See Shrewsborough.)

[123] C. E. Banks: *New Engl. Hist. & Geneal. Reg.*, April, 1896, p. 165.

[124] *Milton Records*, 1900, pp. 217, 220. Davenport and Fenno families. *Journal of Rev. Thomas Smith*, June 27, 1738.

[125] *Boston News-Letter*, June 24-July 1, 1736.

[126] *Oxford Vital Records.* Multiple deaths in Hudson (7 children died within 19 days) and Town families.

[127] Eaton: *Geneal. Hist. of Reading*, 1874, p. 148. *Reading Vital Records.* Multiple deaths in Batt, Burnap, Damon, Emerson, Nickolls, Parker, Stow, Swain, and Townsend families.

[128] *Boston News-Letter*, Feb. 5-12, 1736. *Sherborn Vital Records.* Multiple deaths in Greenwood, Lealand, Sanger, and Warfield families.

[129] "We have an Account that the Throat Distemper has lately proved very mortal in several Towns in the County of Worcester. The Rev. Mr. Cushing of Shrewsborough has bury'd three Children of it, two in a Coffin; Capt Hapgood an hopeful Son of 14 or 15 Years; Mr. Simon Goddard two, and another very bad. In Southborough Lieut. Brigham has bury'd three, and his Brother Thomas (of Marlborough) two. Mr. Beal two; and Mr. Ephraim Ward's wife three Children; and several others have dy'd there. And in Westborough Mr. Hayward two Children, and several others are Sick; and it now begins to come upon them more terribly."—*New Engl. Weekly Journal*, Aug. 12, 1740.

[130] *Southborough Vital Records.* Beals, Brigham, and Britten families. See also Shrewsborough, and *Town of Weston, Births, Marriages and Deaths*, p. 434.

[131] Benedict and Tracy: *Hist. of Sutton*, p. 59.

[132] *Uxbridge Vital Records.* Multiple deaths in Holbrook, Keith, and Rawson families.

[133] *Watertown Records*, Vol. iii, p. 112. Parce family lost four children.

[134] *Boston News-Letter*, Dec. 18-23, 1736; *New Engl. Weekly Journal*, Nov. 13, 1739; *Town of Weston, Births, Deaths and Marriages*, 434 et seq.

[135] *Thomas Smith's Journal*, June 27, 1738. *Woburn Vital Records.* Richardson family lost four.

time for relaxation and amused himself with his economic theories and his maps, while Zabdiel Boylston undoubtedly enjoyed his spacious new home and gardens in the country.[136] When Daniel Henchman sent out his questionnaire in 1737, he, too, believed that the epidemic had definitely passed. There was less anxiety at the selectmen's meetings as they seriously debated about sewers and schools and liquor-permits and the bulls that were grazing on the Common. The storm was over and it appears from the records that, in comparison with other towns, Boston had been more scared than hurt.

Meanwhile, the diphtheria epidemic was slowly descending from the north and had reached Marblehead in 1737 and Malden in 1738, and the Boston people had more reason to be grateful for their superior medical attention and the "laudable and salutary rash" as they frequently read in their newspapers about the frightful devastation in the country towns. In 1739, however, the destructive "Angel" was again seen hovering over the town, and for the benefit of those who had fallen from the state of grace a warning appeared in the form of broadside verse:

Earnest EXPOSTULATION

O Earth Earth Earth attend,
The mighty God hath spoke
Why will you still offend 'gainst me?
Why will you me provoke?

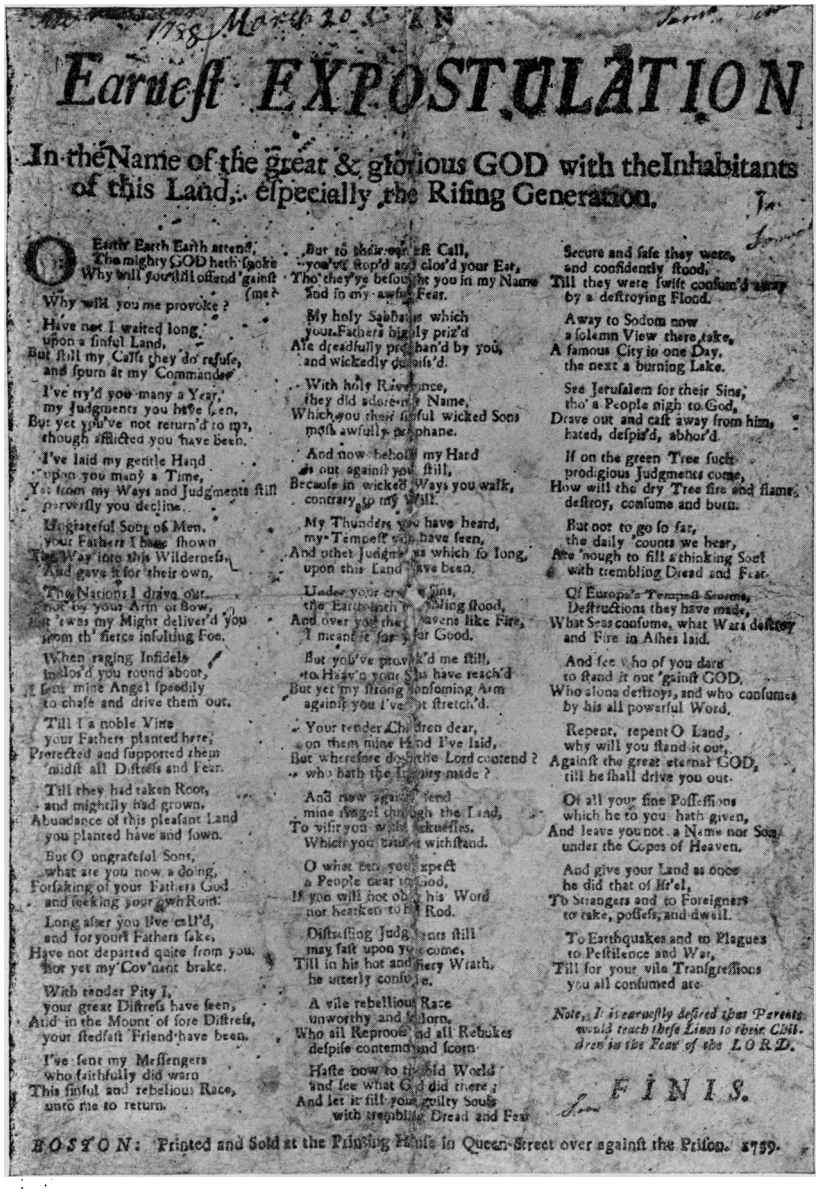
* * *

But O ungrateful Sons,
what are you now a doing
Forsaking of your Father's God
and seeking your own Ruin.

* * *

Your tender Children dear,
on them mine Hand I've laid,
But wherefore doth the Lord contend?
who hath the Inquiry made?

[136] Then called Muddy River, now Boylston St. in Brookline, where his house, built in 1736, still stands.



1758 March 20

# Earneſt EXPOSTULATION

## In the Name of the great & glorious GOD with the Inhabitants of this Land, eſpecially the Riſing Generation.

O Earth Earth Earth attend,
The mighty GOD hath ſpoke
Why will you ſtill offend 'gainſt me?
Why will you me provoke?

Have not I waited long
upon a ſinful Land,
But ſtill my Calls they do refuſe,
and ſpurn at my Commands?

I've try'd you many a Year,
my Judgments you have ſeen,
But yet you've not return'd to me,
though afflicted you have been.

I've laid my gentle Hand
upon you many a Time,
Yet from my Ways and Judgments ſtill
perverſly you decline.

Ungrateful Sons of Men,
your Fathers I have ſhown
The Way into this Wilderneſs,
And gave it for their own.

The Nations I drive out
not by your Arm or Bow,
But 'twas my Might deliver'd you
from th' fierce inſulting Foe.

When raging Infidels
incloſ'd you round about,
I ſent mine Angel ſpeedily
to chaſe and drive them out.

Till I a noble Vine
your Fathers planted here;
Prerected and ſupported them
midſt all Diſtreſs and Fear.

Till they had taken Root,
and mightily had grown,
Abundance of this pleaſant Land
you planted have and ſown.

But O ungrateful Sons,
what are you now a doing,
Forſaking of your Fathers God
and ſeeking your own Ruin.

Long after you I've call'd,
and for your Fathers ſake,
Have not departed quite from you.
tho' yet my Cov'nant brake.

With tender Pity I,
your great Diſtreſs have ſeen,
And in the Mount of ſore Diſtreſs,
your ſtedfaſt Friend have been.

I've ſent my Meſſengers
who faithfully did warn
This ſinful and rebellious Race,
unto me to return.

But to their earneſt Call,
you've ſtop'd and clos'd your Ear,
Tho' they've beſought you in my Name
and in my awful Fear.

My holy Sabbaths which
your Fathers highly priz'd
Are dreadfully prophan'd by you,
and wickedly deſpiſ'd.

With holy Reverence,
they did adore my Name,
Which you their ſinful wicked Sons
moſt awfully prophane.

And now behold my Hand
is out againſt you ſtill,
Becauſe in wicked Ways you walk,
contrary to my Will.

My Thunders you have heard,
my Tempeſt you have ſeen,
And other Judgments which ſo long,
upon this Land have been.

Under your cruel Sins,
the Earth hath groaning ſtood,
And over you the Heavens like Fire,
I meant it for your Good.

But you've provok'd me ſtill,
to Heav'n your Sins have reach'd
But yet my ſtrong conſuming Arm
againſt you I've not ſtretch'd.

Your tender Children dear,
on them mine Hand I've laid,
But wherefore does the Lord contend?
who hath the Iniquity made?

And now again I ſend
mine Angel through the Land,
To viſit you with Diſeaſes,
Which you cannot withſtand.

O what can you expect
a People dear to God,
If you will not obey his Word
nor hearken to his Rod.

Diſtreſſing Judgments ſtill
may fall upon you come,
Till in his hot and fiery Wrath,
he utterly conſume.

A vile rebellious Race
unworthy and forlorn,
Who all Reproofs and all Rebukes
deſpiſe contemn and ſcorn.

Haſte now to the old World
and ſee what God did there;
And let it fill your guilty Souls
with trembling Dread and Fear.

Secure and ſafe they were,
and confidently ſtood,
Till they were ſwift conſum'd away
by a deſtroying Flood.

Away to Sodom now
a ſolemn View there take,
A famous City in one Day,
the next a burning Lake.

See Jeruſalem for their Sins,
tho' a People nigh to God,
Drave out and caſt away from him,
hated, deſpis'd, abhor'd.

If on the green Tree ſuch
prodigious Judgments come,
How will the dry Tree fire and flame,
deſtroy, conſume and burn.

But not to go ſo far,
the daily 'counts we hear,
Are 'nough to fill a thinking Soul
with trembling Dread and Fear.

Of Europe's Tempeſt Storms,
Deſtructions they have made,
What Seas conſume, what Wars deſtroy
and Fire in Aſhes laid.

And ſee who of you dare
to ſtand it out 'gainſt GOD,
Who alone deſtroys, and who conſumes
by his all powerful Word.

Repent, repent O Land,
why will you ſtand it out,
Againſt the great eternal GOD,
till he ſhall drive you out.

Of all your fine Poſſeſſions
which he to you hath given,
And leave you not a Name nor Son
under the Copes of Heaven.

And give your Land as once
he did that of Iſ'el,
To Strangers and to Foreigners
to take, poſſeſs, and dwell.

To Earthquakes and to Plagues
to Peſtilence and War,
Till for your vile Tranſgreſſions
you all conſumed are.

*Note, It is earneſtly deſired that Parents would teach theſe Lines to their Children in the Fear of the LORD.*

FINIS.

BOSTON: Printed and Sold at the Printing Houſe in Queen-Street over againſt the Priſon. 1759.

(Courtesy of the American Antiquarian Society. Previously reprinted in *American Broadside Verse*, by O. E. Winslow, Yale University Press, 1930, p. 180.)

Distressing Judgments still
may fast upon you come
Till in his hot and fiery Wrath,
he utterly consume.

* * *

Of all your fine Possessions
which he to you hath given,
And leave you not a Name nor Son
under the Copes of Heaven.

It was "earnestly desired that Parents would teach these Lines to their Children!"

There was another increase in deaths in Boston during 1740, but this may have been the normal variation and would be without significance except that there was a similar slight increase in the Dorchester deaths at the same time. All in all, however, there is no evidence of any great amount of sickness in Boston itself, but across the river at Harvard College and surrounding Cambridge there was a definite epidemic. In the preface to a medical book dated at Cambridge in 1740, the printer stated: ". . . now that we have a fresh Alarm by a Return of that astonishing Distemper among us . . ."[137] Three children of one Stedman family and two of another died during the week of June 23rd and about the same time Ruth and Andrew Bordman, grandchildren of the college steward, died.[138] Edward Holyoke, President of Harvard, lost his wife and two-year-old son, William. It was greatly feared that the disease would spread among the students, so it was "therefore Voted, that they be immediately dismissed from the College, and that the vacation begin from this time; and that the Commencement for this year be not until the expiration of the vacation." Holyoke recorded in his diary that a private fast was held at Cambridge on July 2, and the next day,—"The Com[mence]ment put by on account of the throat distemper."[139]

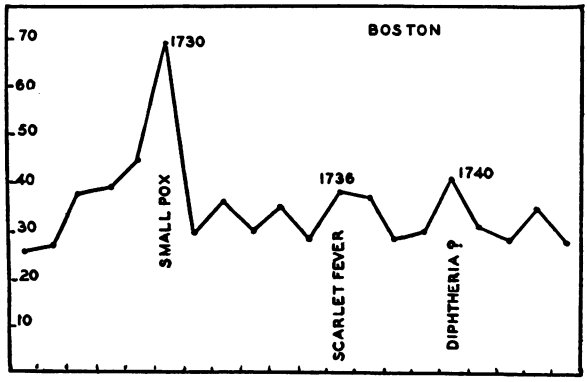
It seems that by a "return" of the epidemic was meant a true recurrence of the previous scarlet fever, but the frequency of multiple deaths suggests diphtheria instead. Additional evidence that diphtheria was present is to be found in *An Account of the Throat Distemper, in a letter from Wm. Douglas M.D. to ——— of New*

[137] Jonathan Dickinson: *Observations, etc.* Apparently, Cambridge was involved in the scarlet fever epidemic of 1735-36.

[138] L. R. Page: *Hist. of Cambridge,* p. 132.

[139] *Holyoke Diaries, 1709-1856.* Salem, 1911.

*York.* This publication, said to have been printed by Zenger in 1740, is extremely rare and no copy is available at this time, but undoubtedly it is the same as the letter that Douglass sent in Nov. 1739 to Cadwallader Colden, the physician, scientist, statesman, and philosopher of New York. Douglass frequently wrote to Colden and in this particular letter gave permission for publication.[140]




Boston, Mass., deaths per 1000 population, for the period 1725 to 1744. Compiled from statistics in *Census of Boston for the Year 1845*, by Lemuel Shattuck. Boston, 1846.

Although he still believed that he was dealing with the same disease, Douglass' descriptions in 1739 differed in many ways from those of 1736. For example, he said in 1736 that he had observed no instances where the same person was infected twice and that those physicians who had observed second attacks were probably mistaken. At that time, Douglass was right because scarlet fever seldom attacks again the same person within a short period of time. In 1739, however, he admitted that he had seen "Some Second Seizures but with some variation in the symptoms." If Douglass confused the two diseases his statement can be readily understood, particularly when the "variation in the symptoms" points to another disease. He also stated in 1739 that the cases were not accompanied by nausea, that there were ulcers on the skin and mucous membranes, and that the "Tonsils and other parts of the Fauces [were] infiltrated and Speck'd, throwing up from time to time thick cream coloured sloughs (in those who were very bad, from parts further than the Eye can reach) . . ." His most significant statement concerns the respiratory system. Though, in 1736, he mentioned a few cases with laryngeal involvement, a very noticeable feature of his 1739 account was that: "The last complaint is of an oppression and stricture in the upper part of the chest . . . asthmatick breath-

[140] *Coll. New York Hist. Soc. for 1918*, 1919, p. 196; 1923, p. 337.

ings, a deep pulmonary hollow hoarse cough, ending in a loud strangled countenance & death."

It is apparent that Douglass had seen the fatal, membranous, diphtheritic croup and, although it is not so apparent whether he had seen those cases in Boston, Marblehead, or Malden, the essential fact remains that in 1739, "throat distemper" to Douglass, at least, and probably to many others, included cases of diphtheria. Therefore, the so-called "return" to Boston and Cambridge was not necessarily a true recurrence of the previous scarlet fever. More probably it was the "throat distemper" in its other form. "Returns" also occurred in other towns and further complicate the history of the Massachusetts epidemic. Sometimes they were spurious "returns"—unrelated to the previous infection—and sometimes the epidemics did actually recur, especially in those towns where diphtheria caused the initial outbreak.[141]

It is difficult to trace the "throat distemper" in Massachusetts after 1740. A proclamation in 1741, which mentions "that awful Distemper whereby so many of the children of this people have been cut off . . ." and the *Vital Records* of many of the smaller towns show that it had by no means disappeared, but there are fewer contemporary comments probably because it was no longer "new." From the meager records, particularly after measles[142] and influenza[143] had appeared, it is almost impossible to make a satisfactory diagnosis. Besides, there were other important events to divert the people's attention. The "War of Jenkins' Ear" had been declared in 1739, and soon after, Whitefield and Tennant came preaching new religious doctrines. Then Jonathan Edwards, in the Connecticut River Valley, had caught his second wind and his voice echoed over the hills to the Atlantic shores. Indeed, the very

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[141] See Hampton graph.

[142] *New Engl. Hist. & Geneal. Reg.*, 1881, xxxv, 28. *Diary of Paul Dudley*, Roxbury, 1740. He writes: "Jan. 8. Measles continue in many Towns . . . Feb. 5. Measles prevail in many towns and the throat distemper yet in the Land. . . April 9 . . . The Rash pretty brief [mild?]—and so the Measles. . . June. The Throat Distemper got to Cambridge. Several died particularly Madam Holyoke. . . Nov. The Throat distemper in many parts of the Province and very mortal." Dudley apparently distinguished the "Rash" (scarlet fever?) from measles and "Throat Distemper" (diphtheria).

[143] *New York Gazette*, Feb. 21-28, 1737/8; Benedict and Tracy: *Hist. of Sutton*, 1878, p. 59.

devil himself was preparing for his leap from the steeple of the Ipswich church, for the "Great Awakening" was now definitely under way and the "throat distemper" with everything else was crowded off the stage.

## VIII

### CONNECTICUT

And now behold my Hand
is out against you still,
Because in wicked Ways you walk,
contrary to my Will.

—Earnest EXPOSTULATION.

Little is known about the "throat distemper" in Connecticut,[144] chiefly because contemporary writers, more impressed by the startling events in the other provinces, seldom mentioned Connecticut in their accounts. It was taken for granted that the Connecticut epidemic was a part of the "Eastern Distemper" and there was no contemporary student, such as Jabez Fitch in New Hampshire or William Douglass in Boston, interested enough to study the disease. It has seemed worth while, nevertheless, to gather together the few and disconnected reports, not only because they have never before been assembled but also because they are of considerable epidemiologic importance when considered with other phases of the epidemic. A review of the facts in their chronological sequence reveals a number of interesting features concerning geographical progress, mortality, and diagnosis.

The Connecticut epidemic began, not in the regions close to Massachusetts, as one might reasonably expect, but in Stamford in the southwest corner of the colony. Although two children of Caleb Smith died within a few days of each other during the autumn of 1735, the multiple deaths in the family of Joseph and Mary Smith are the first certain evidence of an epidemic:

| | | | | |
|---|---|---|---|---|
| John | died | January | 9 | 1735/6 |
| Sarah | " | " | 9 | " |
| Hannah | " | " | 17 | " |
| Abigail | " | " | 18 | " |
| Isaac | " | " | 25 | " |

[144] Unless otherwise specified, the material for this chapter was taken from manuscript copies of town records in the Conn. State Library at Hartford. When "son," "daughter," or "child" was mentioned, I have assumed the age to be under twenty years.

The town records do not give the cause of death, but about a month later the *Boston News-Letter* (Feb. 19-26, 1736) reported:

> We have an Account from Connecticut, That the Distemper that has for some Months past prevail'd at the Eastward, has now got into the Western Part of that Colony, where several Children and Young People have lately died; particularly at Stamford, where one Mr. John [sic] Smith has buried Five Children in a little more than a Fortnight; and some Families in that Town that had but Three or Four Children have buried them all.

The severity of the Stamford epidemic cannot be learned from the town records because they are noticeably incomplete in not even mentioning the other families that lost "Three or Four Children," but the records do mention other multiple deaths later in 1736. The *News-Letter* identifies the disease as "throat distemper" but, as has been pointed out, that could mean either scarlet fever or diphtheria. During the epidemic, Nathaniel Hubbard, a Stamford physician, wrote to Henry Lloyd of Lloyd's Neck across the Sound[145] and suspecting that some of the Lloyd children were suffering from the disease, he advised:

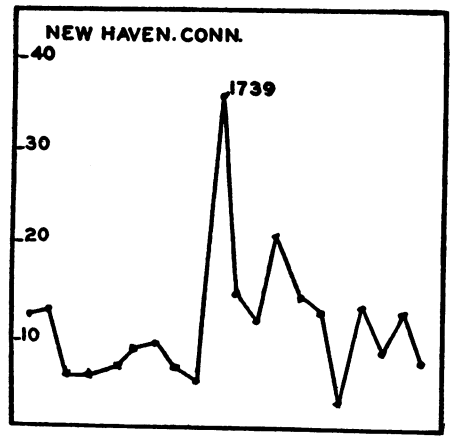
> . . . You may know this Distemper by the following Symptoms Viz: A hot pricking pain about the throat and Ears, white specks in the Throat, At first a white Tongue then yellow & if the fever be great it grows black, some time a swelling under the Throat, if the Fever be very high restlessness, watery Eyes, Paleness of the Face, with external coldness & great dr[ought] In which Case give Saffron tea or something to drive the fever out. My hearty respects at home. I am Sir
>
> Your obliged & Dutiful Kinsman.

From Hubbard's failure to mention any rash, together with the frequent multiple deaths, one may be fairly certain that diphtheria was the cause of the Stamford epidemic.

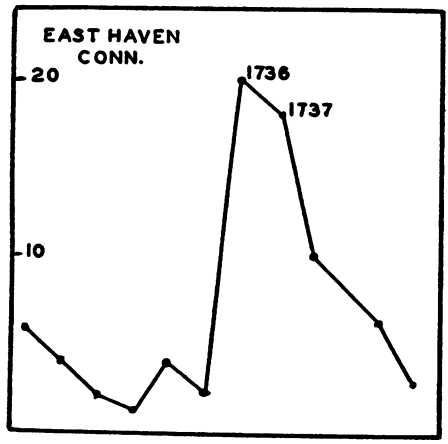
Not much can be said about the other shore towns of Fairfield County,[146] chiefly because of incomplete records, but in New Haven there was a definite epidemic with an unusual variation. Timothy Dwight,[147] writing in 1811, said: "About the year 1736 the Angina Maligna was prevalent and extensively fatal." The source

[145] *Coll. New York Hist. Soc.*, 1927. *Papers of the Lloyd Family.* i, 349.
[146] There is slight evidence of an epidemic about 1738.
[147] Timothy Dwight: *Statistical Account of New Haven*, p. 63.

of Dwight's information has not been ascertained, but other slight evidence that the epidemic began in 1736 is to be found on tombstones in the Grove Street Cemetery.[148] As the names of many children who died during 1736-1739 are not mentioned in the town records,[149] the graph constructed upon those records does not show the full extent of the epidemic. As in one or two other Connecticut towns it probably smouldered a while before bursting into full flame. The statistics, though incomplete, reveal that the peak was reached in 1739 and this is confirmed from other sources:



New Haven, Conn., deaths, 1730-1749.



East Haven, Conn., deaths, 1730-1741.

> We hear from Connecticut That the Throat Distemper rages very much at New Haven, and that one Mr. [Samuel] Mix of that Place, who had five children, and buried them all in a little more than a Week's time.[150]

The Rev. Daniel Wadsworth mentions in his diary:[151]

> July 28 1739. This day heard y$^{t}$ Samuel only son of M$^{r}$ Daniel Edwards of New Haven died on thursday of y$^{e}$ throat distemper. Aug 14 1739. This day set out on a Journey for my health in Com-

[148] F. B. Dexter: *New Haven Tombstone Inscriptions*, in *New Haven Hist. Soc. Coll.*, iii.

[149] Multiple deaths in the families of Samuel Barns, Samuel Bishop Jr., Abner Bradley, John Bradley Jr., Ezekiel Sanford, and the Rev. Mr. Joseph Noyes. *Vital Records of New Haven*, 1917.

[150] *Boston News-Letter*, August 23-30, 1739.

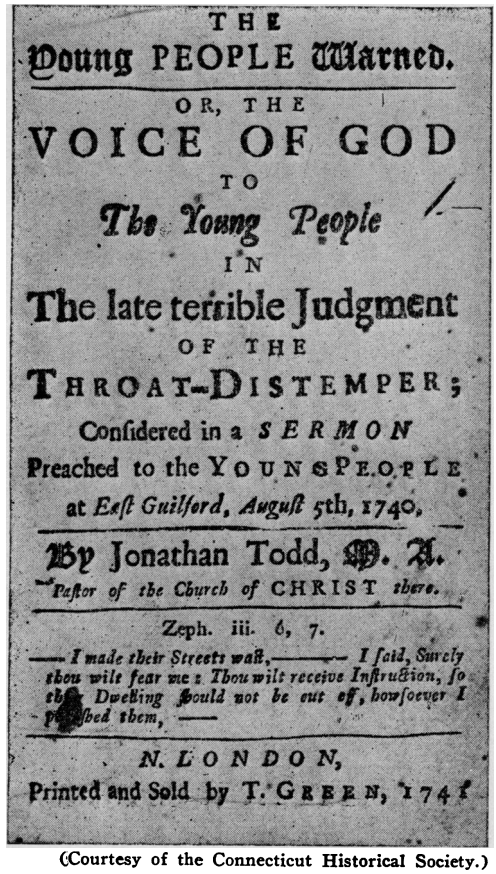
[151] *Diary of the Rev. Daniel Wadsworth.* Hartford, 1894, p. 40.

pany with M[r]. Colton, travelled as far as New Haven, the throat distemper prevails there.

The epidemic was complicated by the prevalence of influenza in 1737 and of measles in 1739 (Dwight). There are no detailed case descriptions at hand so the diagnosis of "throat distemper" must suffice.

The summer of 1736 was unusually hot and dry, and during the last half of the year the epidemic raged violently along the Connecticut shore. In East Haven, then a parish of New Haven, it was very severe, and in a population of about two hundred people there were twenty-six deaths under twenty years of age. It began in the autumn and continued throughout the winter.[152]

From 1730 to 1735 there were about three deaths annually among the children of Guilford, which at that time included East Guilford (now Madison). During the autumn of 1736, thirty-eight children died.[153] A sermon by the Rev. Jonathan Todd[154] throws some light upon the nature of the disease:



THE
Young PEOPLE Warned.
OR, THE
VOICE OF GOD
TO
The Young People
IN
The late terrible Judgment
OF THE
THROAT-DISTEMPER;
Conſidered in a SERMON
Preached to the YOUNG PEOPLE
at *Eaſt Guilford, Auguſt* 5th, 1740.
By Jonathan Todd, M. A.
*Paſtor of the Church of* CHRIST *there.*
Zeph. iii. 6, 7.
——*I made their Streets waſt,*—— *I ſaid, Surely thou wilt fear me: Thou wilt receive Inſtruction, ſo thy Dwelling ſhould not be cut off, howſoever I puniſhed them,* ——
*N. LONDON,*
Printed and Sold by T. GREEN, 1741.

(Courtesy of the Connecticut Historical Society.)

He must be a Stranger indeed in these Parts of the World, who hath not heard of the Desolations made in Sundry Parts of the Country, by that Distemper, that is usually called, The Throat-Distemper.

[152] Stephen Dodd: *East Haven Register*, 1910, p. 40.

[153] Samuel Fitch, Ebenezer Parmele, Stephen Spencer, and Capt. Timothy Stone lost two or more children apiece.

[154] Jonathan Todd: *The Young People Warned. . . .* N. London, 1741.

Near Five years ago [the sermon was printed in 1741] we in this Parish were Visited with the same; and sundry very pleasant and hopeful Young Persons were taken away. Since which Time, we have had an Account of more awful Desolations made by it, in many other Places.

Near the Latter End of July last, a very hopeful, serious and likely Young Person, named Prudence Bishop, the Eldest Daughter of Mr. John Bishop, was taken Sick amongst us; At first indeed, we hoped, that her Sickness might be only a hard Cold, a common sore throat attended with a Feaver, or the Effects of a Rash, as we called a Distemper, that was then among us.

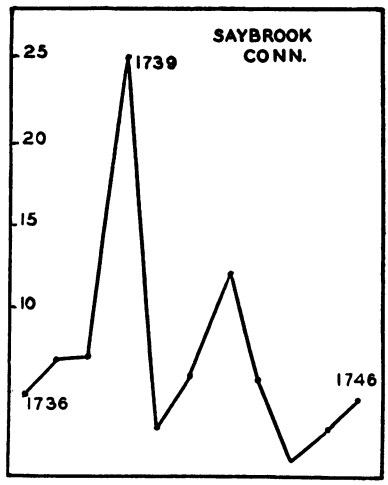
But her Sickness presently increased, and she was brought into uncommon Difficulty and Distress. The justly Famous and well known Physician of these Parts was consulted; who judged her Sickness to be the Throat-Distemper. And to be short, the Distemper made Quick Work and carried her off, August 2d, and her Corps was interred on Lords-Day, August 3d.

My interpretation of these statements is that scarlet fever was present in East Guilford in 1740 and that the laity had not detected any similarity between this "Rash" and the disease that had caused the 1736 epidemic; in other words, although both diseases were accompanied by sore throat, the 1736 disease was not accompanied by a rash and therefore was diphtheria. Throughout the history of the "Distemper," the laity seldom confused the two diseases. The "justly Famous and well known Physician," who was either Jared Eliot or Dr. Gale, was undoubtedly familiar with the prevailing medical theories and probably believed that Prudence Bishop had the 1736 disease but in a different form. On the other hand, it is possible that she did not have a rash and that she actually had the 1736 disease; perhaps she had both scarlet fever and diphtheria. At any rate, regardless of the Bishop case, it seems to me that if the "throat distemper" of 1736 had been accompanied by a rash, the Guilford people would have been more alarmed by the "Rash" that was present in 1740. Now, if it is true that diphtheria was present in 1736 and scarlet fever in


Guilford, Conn., deaths, 1730-1741.

1740, it is interesting to compare the effects of the two diseases upon the same community. In 1740, the increase in deaths was very slight and there are no instances of multiple deaths to be found that year.

Continuing eastward along the shore, we find that in Saybrook, as in New Haven, the epidemic smouldered for a while before it reached a peak in 1739. Twenty-five of the thirty-one deaths (80 per cent) were among children under twenty years of age.[155] In Old Lyme, across the river from Saybrook, two sons of John Denison and two daughters of Benjamin DeWolf died in 1736. The Old Lyme records are not subject to statistical analysis.




Saybrook, Conn., deaths among children, 1736-1746.

The diary of Joshua Hempstead,[156] grandson of one of the first settlers of New London, gives an intimate account of colonial life, and the following extracts were written at the time of the New London epidemic:

1736, May Thursd 27 I was at home al day Diging Stones &c. A Child 6 or yeare old of Thos Hawkins was buried yesterday with the Distemper in the throat. Several of his Children are Sick with it & Wife & Some others. . . June Thurd.3 fair. I was about home foren. aftern I went over the ferry went to Stonington on my young hipt mare Robert & his wife on Pierponts

[155] The Saybrook Church Records (Ms. copy in Conn. Hist. Soc.) show the cumulative effect of the epidemic:

| | | | | | |
|---|---|---|---|---|---|
| Nathaniel Parker | lost | two | children | in | 1736 |
| Jedidiah Dudley | " | three | " | " | 1737 |
| Deacon Blague | " | " | " | " | " |
| John Whittlesey | " | two | " | " | 1739 |
| Samuel Clark | " | four | " | " | " |
| Richard Dickinson | " | " | " | " | " |
| Zebulon Dudley | " | " | " | " | " |
| Isaac Jones | " | two | " | " | " |
| Samuel Willard | " | " | " | " | " |

[156] *Diary of Joshua Hempstead of New London.* New London County Hist. Soc., 1901.

Horse Benja Hempsted & my Nattee on the black mare & my Grandaughter Abigail behind me wee got there by daylight to Son Minors he is gone to Boston. a Lad of about 11 years of age a Son of Comfort Chappels Died with the Destemper that prevails. . .

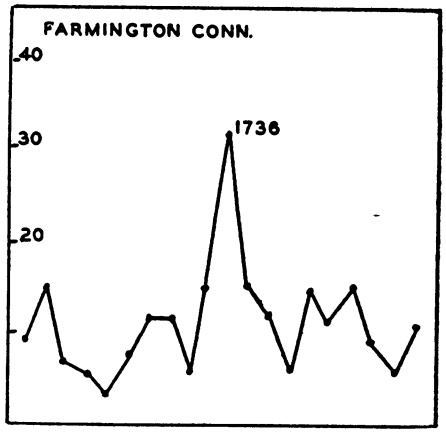
July 18 Ester Fosdyck the Daughter of Dea Thos Fosdyck about 15 years of Age Died with the Sore Throat Distemper sick but 2 or 3 Days. all his Children Sick with it. mond 19 fair I was at home al day Lame Still Ester Fosdyck buried att Evening . . .

Aug 2 . . . Eliabeth Alley the Dauhter of Jacob Alley a young woman near 20 Died last night with the Sore Throat Distemper buried this Evening. Tuesday 3d a Rainy Day I was at home al day a girl of Jno Griffings named Eliza about 7 years old Died with the Throat Distemper . . . Thursd 19 fair & hot I was at home all day I mended 1 wheel put in 3 Spokes I borowd 1 of mr Chapman & 1 before about 2 of the Clock neighbr Thomas Truman Called up Susanna was a Dying I went over & Stayed an hour & beter She Dyed a Little past 3 of the Throat Destemper She was taken Last fryday night had been very bad at turns but yesterday was Considerably beter in a hopefull way to do well and taken in the night with a Sort of a Convulsion after She was grown worse again She was a fatt Lusty Coulered young woman about 20 yr old as likely to live as any person but a few days ago. I was at the burial this Evening Cary Latham a Child of Cary Latham Junrs above 2 year ½ old Died Son of his Second Wife Sarah Waterhouse tht was. fryd 20 fair & hot. I was at home foren. aftern. I went into Town to write a Lease for mr Treat & Chapm brot home my black mare. Saturd 21 fair most of the day a Thunder Shower toward night. I was at home al day. a Second Daughter of Jacob Alleys Dyed above 14 years of age. Sund 22 fair. Mr adams pr al dy. Ann Alleys buried toward night . . .

Sept. Saturd. 4 fair . . . Nattee was taken with the Sore throat Last night & Remains Ill all day. Sund fair Except a Small Shower . . . stayd with Nattee in the afternoon. I Sent for cuz Eliz fox who came & did wht She thot proper for him. John Savels only Son Buried near night aged 2 or 3 & a Daughter of John Colefoxes 5 years both Died with the Sore Throat Distemper yesterday. Mond 6 fair in the forenoon I was at home Looking after Nattee . . . Wednsd 15 fair . . . Ms Sarah Davise buried her youngest Daughter Margaret about 4 or 5 year old, died with the Throat Distemper. . . Tuesd 28 the Supr Court Sat. I was at Court al day My Action with Capt Wm Walker was Tryed & I finally got it. I pd the Jury 30s. & Treated ym 17s &c In the Evening Richard Christophers aged about 24 years Died taken Sick but Last fryday the 5 day. I called at his house about 9 Clock & Saw him Laid out the first man grown in Town yt died with ye Destemper. Wednsd 29 fair. I was at Court al day. Thursd 30 Rainy. I was at Court al Day. Richard Christophers buried vizt put into the Tomb. Mr Seabury pr a funeral sermon at the Church & Read over the prayers (ordained by the Church on Such occasions) at the Tomb before he was

put in. the Pall bearers were all churchmen. Hannah my Son Johns Wife was dd of a Daughter about break of day oct. 1 this night
Oct. fryd 8 fair. I was about Town foren. aftern at home Stacking ye Cornstalks & gathering 1 Ld of. Pumpkins. Jno Hallam hair lip Son of Lt. Edwd Hallam aged 21 years died ys Mor. 6. Clock Saturd 9th fair. I was about home & went to the Marshes, in the Eve at the funeral of Jno Hallam . . . Sat 16 I was at home al day fencing Stacks & mending Colln Browns Coach wheel & at the funeral of Lt Edwd Hallam who Died Last night about 3 or 4 Clock taken Last Sunday with the Throat Distemper. . . 28 fair & Cold. I was out on the Commons for Deacon Fosdick. a Child of Wm Cheapells about 11 year old buried. died with the Throat Distemper. fryd 29 fair in the foren & then Rain till night and at night Snow half Leg Deep. . .

Thus, with the exception of Groton and Stonington, where the "throat distemper" did not appear until after 1750, most of the Connecticut shore towns were involved in 1736. In an effort to check the further spread of the disease, November 24th was appointed as a "Day of Fasting and Prayer throughout the Colony,"[157] although a few of the inland towns had already become involved.



Farmington, Conn., deaths, 1726-1745.

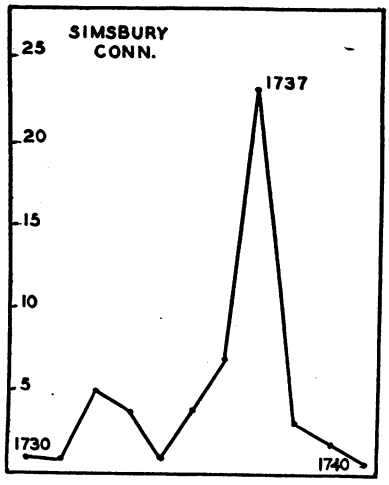
In Ridgefield, north of Stamford, there was an increase in children's deaths, although the figures are too small to be of much significance. In the east-central part of Connecticut there were frequent instances of multiple deaths.[158] Complete figures and case descriptions are lack-

[157] *Boston News-Letter*, Nov. 17-24, 1736; *Boston Evening Post*, Nov. 22, 1736.

[158] In Colchester, Ebenezer Skinner lost five children during the week ending Dec. 3, 1736. The deaths in the First Society Church Records steadily increase to reach a peak in 1740, and during 1736-40 sixty-one children died, which was about two or three times the usual number. There were multiple deaths in the Chamberlin, Dodge, Kellogg, Otis, and Pratt families. The Hebron records are too small for statistical analysis, although there were multiple deaths in the Buell, Carter, Chapwell, Ford, Newcom, and Sawyer families during 1736-40. In Lebanon, Nathan Fitch lost two in 1736; Amos Fuller lost three and Josiah Webster lost four in 1739. In East Haddam, three Brainard children died in Dec.-Jan. 1737/38, and three Gates children died in August, 1740. In Preston, there were multiple deaths in the Fobes and Witter families.

ing for these towns, but the multiple deaths alone are fair evidence of the "throat distemper" because they are seldom found anywhere in Connecticut during the ten years prior to 1736.

The epidemic appeared in Farmington somewhat earlier than in most of the inland towns and the distribution of the deaths was unusual. Asahel Strong Jr. lost four children in September, 1736, but this is the only instance of multiple deaths in the available records.[159] This relative absence of multiple deaths makes the diagnosis of "throat distemper" somewhat doubtful except for other facts. Surely there was an epidemic, as illustrated by the graph, and about eighty per cent of the excess deaths were among the children. Moreover, within a few months an epidemic began in Simsbury, the next town on the north. Here, three of the Pettibone children died in January and four of the Hays children died in March-April, 1737.[160] For a number of years Farmington and Simsbury had been relatively healthy and since some virulent childhood disease broke out in both places at about the same time, it seems fair to assume, though it is not necessarily true, that both epidemics were caused by the same disease. No case descriptions can be cited, so the disease cannot be absolutely identified but the Simsbury epidemic had all the statistical characteristics of the "throat distemper." Besides multiple deaths, there was a sudden marked increase in the death-rate and ninety-six per cent of the excess deaths during 1736-37 were among the children. If the Farmington records are complete, we may conclude that the distemper could occur without causing many multiple deaths, although it seldom appeared without them.




Simsbury, Conn., deaths, 1730-1740.

[159] The Bird, Cogswell, Cole, Denton, Gridley, Hart, Hooker, Lewis, Newel, Porter, Pratt, Seymour, Thomsen, and Woodruf families each lost a child.

[160] Albert C. Bates: *Simsbury Births, Marriages, and Deaths.* Hartford, 1898. Multiple deaths are found also in the Lampson, Holcomb, and Forward families at a later time.

The Rev. Mr. Colton of West Hartford mentioned the epidemic in his election sermon[161] before the General Assembly of 1737:

But the common Engines of divine Wrath in the successive Ages of the World, have been Famine, Sword, and Pestilence: By these the Vengeance of an holy God has been Executed on a wicked world . . .

*Hence there is great reason to conclude that the people in this Land, are very much gone off from God.* For he has turned & done us hurt; He has brought many Evils upon us;

*His walking contrary to us* is a sure Evidence *that we have walked contrary to Him.* If we look no farther back than the space of a Year, may we not in that Time reckon up several plain indications of the Divine displeasure? As, The *scorching Drought* of the last Summer; the *Length & extremity* of the following Winter; the *Coldness & backwardness* of the Spring and *repeated Floods*, by which much damage was sustained; but especially *that awful Sickness* that was sent among us. Of which these things are observable.

1) *Its falling mostly on Children & Young persons, by which means many, even great multitudes have been numbered to the dead.* God has inflicted on us what he threatened *Ahab* with as a heavy Judgment, 1 *King* 21 21 He has taken away our Posterity, the hope of the succeeding generation, *Rev* 2 22 There has been reason to receive that bitter lamentation *Jer* 9 21

2) The Universality of it. Not being confin'd to a few Families, not to a few Towns, or a Province; but spreading very far, even hundreds of miles.

3) *The Nature* of the *Distemper, operating with such violence, and attended with so great malignity, as to putrify the bodies (at least of some) ere the souls remove, to a degree that would (it may be) take some Weeks or Months lying in the Grave to Effect . . .*

By the end of 1737, the epidemic had spread over the southern half of the colony, Newtown, Derby, and Wallingford having become involved.[162] According to the Rev. Daniel Wadworth's

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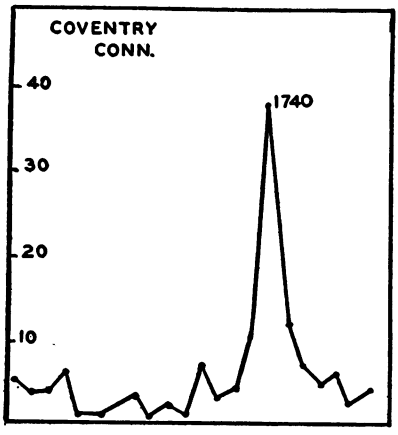
[161] Benjamin Colton: *The Danger of Apostasie in a Sermon Preached before the General Assembly of Connecticut at Hartford, May 12th, 1737.* N. London, 1738.

[162] The Rev. Thomas Toucey of Newtown noted in his account-book the charges for treating Joseph Prindle's five children when they had the "throat distemper" (communication from Mr. Raymond J. Platt, owner of the Toucey ms.). In Derby, four children of Ephraim Washband died in Oct.-Nov. 1737, and four children of Edward Washband died in Feb. 1737/38. There were multiple deaths in the Harger and Smith families also. The Wallingford records are difficult to interpret because of marked yearly variations, but there was an increased number of children's deaths in 1737.

diary, it reached Hartford the following year:

Oct 21, 1738 . . . This day was buried a child of Sam[l] Halladays who died of y[e] throat distemper as was supposed, and this day died a child of Daniel Seymours of y[e] throat distemper.

He also mentions the deaths of three of Benjamin Richard's children in January, 1739, and repeatedly refers to the "time of great distress" in the fall of 1741, although he throws no light upon the nature of the disease.



Coventry, Conn., deaths, 1725-1746.

On the whole, the epidemic seemed less severe throughout the colony during 1738, but the next year it started afresh, especially in the northeast towns.[163] In Coventry there was a frightful epidemic and fifty-three of the sixty-three deaths during 1739-41 were among the children, although there had been only about two deaths among the children each year for the previous twelve years.[164] Dr. Josiah Rose lost his only child. Multiple deaths were frequent and following the names of Benjamin Grover's children, the records[165] say—"all three of y[t] Awfull Destemper in y[e] Throt." The *New-York Weekly Journal* (Oct. 13, 1740) con-

[163] In Mansfield, there were multiple deaths in the Baldwin, Hall, and Sargeant families; and in Ashford, three Knowlton children died during October. John Bishop, of Bolton, lost three children in one month.

[164] S. W. Dimock: *Births, Baptisms, Marriages and Deaths in Coventry*, 1897, lists:

| *Name of Family* | *Number of Children* | *Dates of Death* | |
|---|---|---|---|
| Rust (Daniel) | 2 | Aug. 15-23 | 1739 |
| Grover (Benjamin) | 3 | Dec. 20-31 | " |
| Skinner | 2 | May 7-16 | 1740 |
| Carpenter | 4 | June 5-9 | " |
| French | 4 | Aug. 2-12 | " |
| Jones | 3 | Aug. 7-Sept. 8 | " |
| Hendee | 4 | Aug. 27-31 | " |
| Rust (Samuel) | 3 | Sept. 23-30 | " |
| Grover (Mathew) | 2 | Oct. ?-Nov. ? | " |
| Cowls | 4 | July 23-Sept. 10 | 1741 |

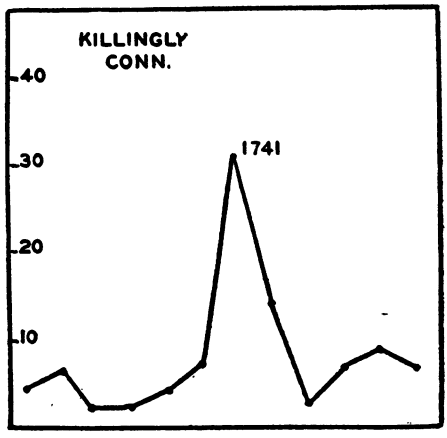
[165] Ms. records in Conn. Hist. Soc.

tained a brief account of this epidemic:

We hear from Coventry, in Connecticut, that for several Months past the Throat Distemper has raged there in a very terrible and awful Manner; and still continues to prove exceeding mortal, even to such a Degree that by the Narrative we have had, the Plague never proved more mortal in London, and altho' application has been made to the wisest and most skilful Physicians, all Endeavors to effect a Cure prove unsuccessful and ineffectual.

Evidently the case fatality rate was very high, so diphtheria is the most probable diagnosis.

The epidemic continued to spread to the northeast and soon involved Killingly.[166] The Pomfret and Woodstock figures[167] are too small to warrant definite conclusions and, in the absence of clinical descriptions, are significant only because of an epidemic in the neighboring towns.



Killingly, Conn., deaths, 1735-1746.

The total number of deaths in Connecticut can only be roughly estimated, since no figures are available for Fairfield, Glastonbury, Stratford, Wethersfield, and Windsor, and the records for Hartford, New Haven, New London, and Stamford are obviously incomplete. The records of

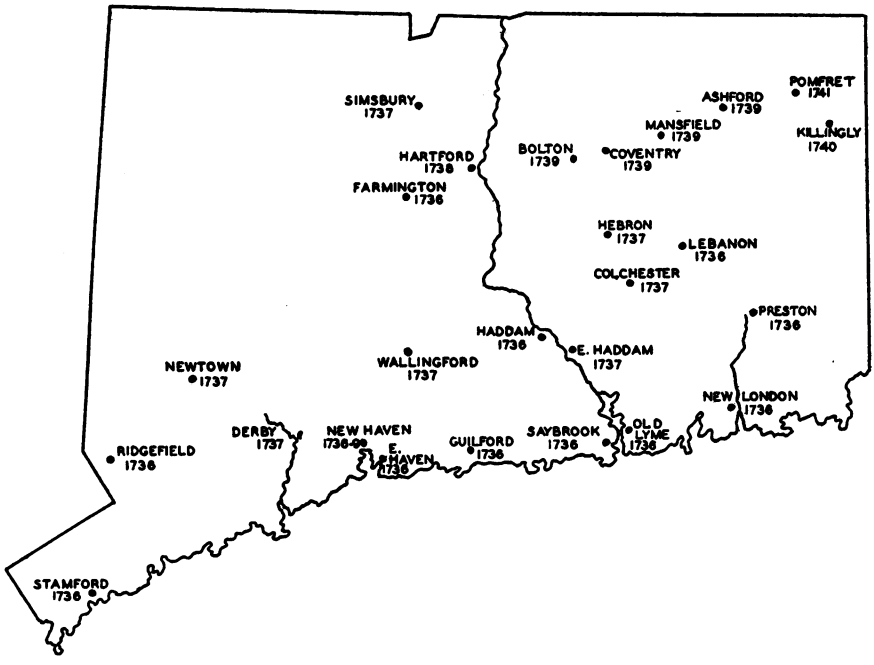
| [166] *Name of Family* | *Number of Children* | *Dates of Deaths* | |
|---|---|---|---|
| Cabot | 3 | Nov. 11-22 | 1740 |
| Child | 2 | Oct. 24-Nov. 5 | " |
| Dresser | 3 | Jan. 1-14 | 1741 |
| Morse | 3 | April 17-May 11 | " |
| Whitmore (Daniel) | 5 | May 1-June 5 | " |
| Whitmore | 4 | June 1-20 | " |
| Bixby | 2 | Sept. 26-Oct. 4 | " |
| Sterns | 3 | Sept. 16-Oct. 20 | " |
| Upham | 4 | Sept. 27-Oct. 15 | " |

[167] There were slight increases in children's deaths in 1736 and 1739. Two Martin children died in 1736 and two Morries children died in 1739; there were no other multiple deaths.

a few towns are of interest:

| *Town* | *Estimated population*[168] | *Epidemic years* | *Excess number of deaths* | *Per cent under 20 years* |
|---|---|---|---|---|
| Coventry | 800 | 1739–41 | 54 | 87 |
| East Haven | 200 | 1736–37 | 26 | 100 |
| Farmington | 1800 | 1736 | 24 | 80 |
| Guilford | 1100 | 1736 | 44 | 82 |
| Killingly | 1000 | 1740–42 | 46 | 90 |
| Simsbury | 1100 | 1736–37 | 29 | 96 |
| | 6000 | | 223 | Aver. 92 |

The variation in the percentages under twenty years can be partly attributed to the method of estimation. The ratio of deaths to population (37 per 1000) cannot be used to estimate the total number of deaths in the colony, because there is little evidence of an epidemic in the northwest and southeast parts and because some towns within the path of the epidemic (Branford and




The spread of the epidemic throughout the towns of Connecticut.

[168] Approximately one-half of the census figures for 1756, by which time the colony had doubled in population.

Killingworth, for example) had no increase in deaths although the records seem to be complete. By actual count over five hundred deaths can be attributed to the epidemic and if the records were complete the number would probably approach one thousand.

It is impossible to estimate the relative importance of scarlet fever and diphtheria in Connecticut, because there is very little clinical information at hand. The "Rash" that was present in East Guilford in 1740 was probably scarlet fever, therefore that disease was probably present in many other towns. Also, in some towns such as Colchester, Hebron, East Haddam, and Woodstock, the deaths were irregularly distributed with increases occurring in separate years and this irregular distribution may have been caused by the presence of two diseases. As has been said, Marblehead (Mass.) had two epidemics very close together but caused by different diseases; the Harvard and Cambridge records suggest a mild epidemic in 1736, possibly scarlet fever, and a second more serious epidemic in 1739-40, possibly diphtheria. It is only because a few Connecticut towns show somewhat analogous findings that two diseases are suspected. The sustained or double peak, however, may be explained on the basis of a single disease. Within the geographical limits of many towns there were two or more separate church societies which were often very far apart and the disease could appear in one and then not in the other until a much later date. To some extent, the spread of the disease would depend upon the treatment by the town physician, for if he believed that the disease was contagious, he might have temporarily inhibited the spread, although on account of the unsuspected healthy carriers he could not have stopped it altogether. So, if separate parts of a town became involved at different times, the records would reveal an irregular rise because all the names were recorded in the same book and it is impossible to determine where each family lived.

Even if scarlet fever was prevalent in Connecticut, there is no reason to suppose that it was any more serious than elsewhere at the same time. The records of Boston, Marblehead, Guilford (?), New York, and New Jersey, the only places where one can be certain that scarlet fever was present to any great extent, indicate that at that time it was a comparatively mild disease and did not greatly contribute to the total mortality of the "throat distemper."

Although it is possible that scarlet fever alone or in combination with diphtheria may have caused some of the trouble in a few Connecticut towns, the evidence suggests that, on the whole, the epidemic was caused by a single disease, which first appeared in the southwest (Stamford, 1736) and spread gradually to the northeast (Killingly, 1740-41). The Stamford clinical evidence, the frequency of multiple deaths in nearly all of the towns, and the very high mortality in Coventry and some of the other towns make a diagnosis of diphtheria more than probable.

True recurrences of the epidemic occurred in many Connecticut towns, as elsewhere in New England (see Hampton graph). These recurrences appeared some five to ten years later but they were too irregular and too numerous for a detailed account.

## IX

### NEW YORK

No effort has been made to trace the epidemic in New York. Cadwallader Colden supposed that it spread directly from Kingston and that it took two years to reach the Hudson River:[169]

> It continued on the east side of Hudson's river, before it passed to the west, and appeared in those places, to which the people of New England chiefly resorted for trade, and in the places through which they travelled.

He also intimated that the disease was mild when accompanied by a rash and was more fatal when the larynx was involved. Here again there is evidence of both diseases, but most of Colden's information was obtained through correspondence with William Douglass and it is impossible to determine the part that can be attributed to personal observation.

The epidemic appeared on Long Island also. The Rev. Ebenezer Prime noted in his diary:[170]

> On October 3d, 1736, after a short but violent Illness, dyed at Huntington, of the throat distemper, my dear sister Hannah Prime.

The disease probably spread to Huntington from Stamford, which is directly across the sound. In Easthampton, also, there were many deaths from the distemper during 1736 and 1738.[171]

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[169] *Med. Obs. and Inquiries*, 1753, i, 211.
[170] E. D. G. Prime: *Notes of the Prime Family*. 1888, p. 20.
[171] *N. Y. Geneal. & Biog. Rec.*, xxxiv, 251.

## X

### NEW JERSEY

To th' silent Grave, great numbers have,
of late been carried,
Our Children dear, both far and near,
are posting to the dead.

—Earnest EXPOSTULATION.

An account of the New England epidemic would be incomplete without reference to a similar one in New Jersey because it is possible that they were related to each other.

On February 9, 1735/6, the *New York Weekly Journal* reported an epidemic of "Throat Distemper" at Crosswicks in West Jersey. A clinical description of the "terrible Disease in the Throat that has made such Desolations in the Country" appeared the following week in the same journal. The anonymous author said that the epidemic began "at Newark Mountains [Orange]; and at first proved mortal to almost all that had it." In his description there are indications of diphtheria of the throat and larynx, but although there are also indications of tonsillitis and some extraneous diseases, no evidence of scarlet fever can be discerned. This article, though unsigned, was written by the Rev. Jonathan Dickinson (1688-1747).[172] He, Jared Eliot, another notable minister-physician of Killingworth, and Timothy Woodbridge, a minister at Simsbury, comprised the class of 1706 at Yale. Two years later, he was called to the church at Elizabeth Town, New Jersey; and eventually he became the first president of the College of New Jersey (Princeton). Those were the days when theological questions were settled by pamphlet wars, and Dickinson, with a courageous and prolific pen, became generally known as one of the ablest and most influential religious leaders in the colonies.[173]

Dickinson's second medical work, more notable than his first, was entitled: *Observations on that terrible Disease vulgarly called the Throat Distemper . . .* It was dated at Elizabeth Town, Feb. 20, 1738/9 and printed in Boston in 1740. This pamphlet,

[172] "In my No 119, I inserted a Letter from Mr. Jonathan Dickinson of Elizabeth-Town, containing an Account and proposing a Method of Cure of a Distemper which rages in divers Parts of this Country." *New-York Weekly Journal*, March 8, 1735/36.

[173] E. F. Hatfield: *Hist. of Elizabeth.* 1868, p. 326.

CXIX.

THE

# New-York Weekly JOURNAL.

*Containing the freſheſt Advices, Foreign, and Domeſtick.*

*MUNDAY* February 16th, 1735.

Mr. *Zenger.*

*THE following Letter contains a particular Diſcription of a fatal Diſtemper, which is now epidemical in many Parts of this Country; propoſes a Method of Cure, which has been attended with uncommon Succeſs, if you'll give it a Place in your* Journal, *it may gratify many of your Readers, and be of extenſive Service to Mankind.*

*A Letter to a Friend in* New-York.

*SIR,*

ACcording to your Deſire, I ſhall endeavour to give you the moſt plain and familiar Account I can of the terrible Diſeaſe in the Throat, that has made ſuch Deſolations in the Country; with the Method of Cure that has proved ſo very ſucceſsful in theſe Parts, that there has few or none dyed under my Care for a great while, that I could ſeaſonably and ſteadily tend; except ſome that would not be perſwaded, and were ſo Old to be compelled to the neceſſary Methods of cleanſing their Throats.

The Diſeaſe began near a Year ago at *Newark* Mountains; and at firſt proved Mortal to almoſt all that had it; and has continued among us ever ſince, that I have had great Opportunity of a particular Acquaintance with it; and great Cauſe of Thankfulneſs for a continued Series of Succeſs, in dealing with it.

It's common Appearance is with a Tumefaction of the *Tonſils Uvula*, and Parts adjacent, which at firſt appear very red and enflamed; and in about two or three Days, and ſometimes ſooner, are covered with a white Furr, very eaſily waſhed off at firſt; but if not immediately cleanſed and kept clean, it faſtens, grows hard, and can no way be removed, but by a gradual Digeſtion, whereby it is looſened, and comes off like an Eſcar. It ordinarily extends to the *Larynx* or Mouth of the *Windpipe*, and ſo finiſhes the Tragedy, by taking away the Voice; and procuring a continual ringing Cough.

It ſometimes raiſes the Cuticula upon the *Tonſils, Uvula*, and contiguous Parts; and appears with Puſtules, greatly reſembling the ſeparate *Small-Pox*, filled with a laudable Coloured Pus, and this we find the moſt favourable Kind.

It ſometimes appears with a ſmall Pimple, Bliſter or Scab, upon the Face or Neck, from whence a ſpeedy and large Inflammation ariſes in all the adjacent Parts, very much imitating an *Eriſypelas*, which ſoon ſeizes the inſide of the Throat, and if not immediately helped, terminates in a mortal Gangreen.

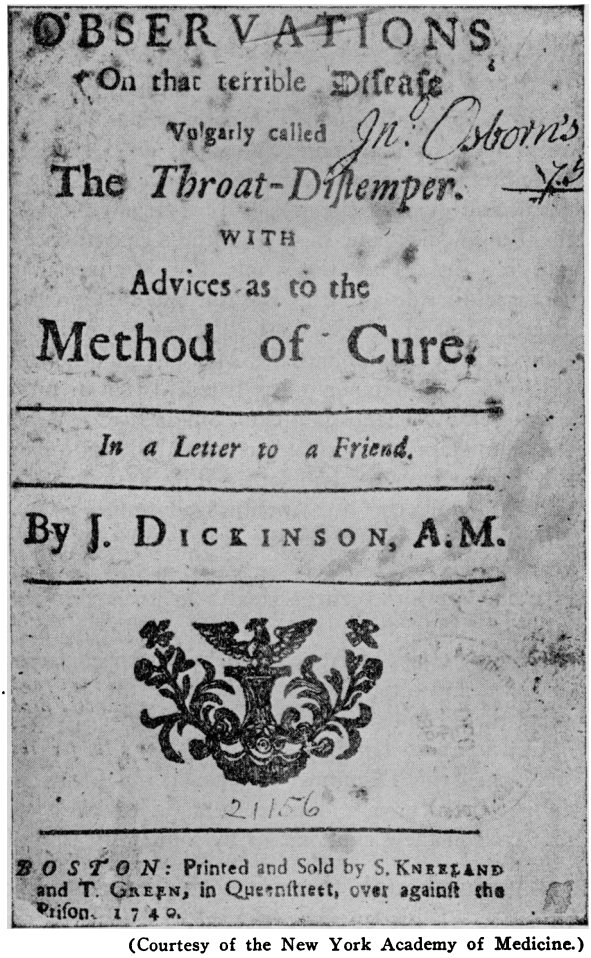
It very often begins behind the *Ears*, in the *Armpits*, upon the *Navil* or other Parts of the Body, at firſt with a white Protuberance, the neighbouring Parts enflaming and encreaſing to a great Bigneſs with a ſwelling and quickly turning Black and ſphacelating, if not prevented. If theſe corroſive Ulcers are ſeaſonably cured, it uſually prevents the ſore Throat, it otherwiſe commonly finiſhes there.

It often appears in the Form of a *Bubo*, or very angry *Boil*, under the Ears, behind the Head or upon the Neck, which if quick digeſted and opened, the Patient is ſafe, otherwiſe a Mortal Gangreen may enſue.

If the Diſeaſe gains Ground, and is not ſeaſonably checked, the Glands quite round the Neck are much ſwelled, and the whole Neck is covered with Tumors about the bigneſs of a Nutmegg; and the Tumefaction ſometimes extends even to the Pit of the Stomack.

Th

the second medical publication by a Yale graduate,[174] is one of the few outstanding contributions to early American medicine and since it is now very scarce, yet of great importance in the history of the "throat distemper," a few of the essential passages are quoted at length:[175]


OBSERVATIONS
On that terrible Diſeaſe
Vulgarly called
The Throat-Diſtemper.
WITH
Advices as to the
Method of Cure.
In a Letter to a Friend.
By J. DICKINSON, A.M.
21156
BOSTON: Printed and Sold by S. KNEELAND and T. GREEN, in Queenſtreet, over againſt the Priſon. 1740.

(Courtesy of the New York Academy of Medicine.)

This Distemper first began in these Parts, in Febr. 1734/5. The long Continuance and universal Spread of it among us, has given me abundant Opportunity to be acquainted with it in all its Forms.

The first Assault was in a Family about ten Miles from me, which proved fatal to eight of the Children in about a Fortnight. Being called to visit the distressed Family, I found upon my arrival, one of the Children newly dead, which gave me the Advantage of a Dissection, and thereby a better Acquaintance with the Nature of the Disease, than I could otherwise have had: . . .

The above is quoted, not only because of the importance of the date and multiple deaths, but also to show that Dickinson had the qualifications of a true physician. It is doubtful if any other con-

[174] The first was John Walton's *Essay on Fevers, the Rattles and Canker. Boston, 1732.*

[175] From a reprint in Wickes: *Hist. of Med. in New Jersey.* 1879, p. 87 et seq.

temporary minister displayed such a desire for medical knowledge as to bother with an autopsy. In an orderly manner, he then proceeds to a description of the disease and mentions a "variety of types":

1. I take this Disease to be naturally an Eruptive milliary Fever: and when it appears as such, it usually begins with a Shivering, a Chill, or with Stretching, or Yawning; which is quickly succeeded with a sore Throat, a Tumefaction of the Tonsils, Uvula and Epiglottis, and sometimes of the Jaws, and even of the whole Throat and Neck. The Fever is often acute, the Pulse quick and high and the Countenance florid. The Tonsils first, and in a little Time the whole Throat covered with a whitish Crustula, the Tongue furr'd, and the Breath fetid. Upon the 2d, 3d, or 4th Day, if proper Methods are used, the Patient is cover'd with a milliary Eruption, in some exactly resembling the Measels, in others more like the Scarlet Fever (for which Distemper it has frequently been mistaken) but in others it very much resembles the confluent Small Pox. When the Eruption is finished, the Tumefaction every where subsides, the Fever abates, and the Slough in the Throat casts off and falls. The Eruption often disappears about the 6th or 7th Day; tho' it sometimes continues visible much longer. After the Eruption is over, the Cuticle scales and falls off, as in the Conclusion of the Scarlet Fever. If after the Cure of this Disease Purging be neglected, the Sick may seem to recover Health & Strength for a while; yet they frequently in a little Time fall again into grievous Disorders; such as a great prostration of Strength, loss of Appetite, hectical Appearances, sometimes great Dissiness of Sight, and often such a weakness in the Joints as deprives them of the Use of all their Limbs; and some of them are affected with scorbutick Symptoms of almost every Kind.

When this Distemper appears in the Form now described, it is not very dangerous: I have seldom seem any die with it, unless by a sudden Looseness, that calls in the Eruptions, or by some very irregular Treatment.

Even though there is some suggestion of diphtheria, and even in spite of his specific denial, Dickinson was undoubtedly dealing with the disease that we now call scarlet fever. It is also apparent that the New Jersey scarlet fever was, as a rule, comparatively mild.

But there are several other very different Appearances of the Disease, which are attended with more frightful and deadly Consequences.

2. It frequently begins with a slight Indisposition, much resembling an ordinary Cold, with a listless Habit, a slow & scarce discernable Fever, some soreness of the Throat and Tumefaction of the Tonsils: and perhaps a running of the Nose, the Countenance pale, and the eyes dull and heavy. The Patient is not confin'd, nor any Danger apprehended for some Days, till the

Fever gradually increases, the whole Throat, and sometimes the Roof of the Mouth and Nostrils, are covered with a cankerous Crust, which corrodes the contiguous Parts, and frequently terminates in a mortal Gangreen, if not by seasonable Applications prevented. The Stomach is sometimes, and the Lungs often, covered with the same Crustula. . . When the Lungs are thus affected, the Patient is first afflicted with a dry hollow Cough, which is quickly succeeded with an extraordinary Hoarseness and total Loss of the Voice, with the most distressing asthmatic Symptoms and difficulty of Breathing, under which the poor miserable Creature struggles, until released by a perfect Suffocation, or Stoppage of the Breath. This last has been the fatal Symptom, under which the most have sunk, that have died in these parts. And indeed there have comparatively but few recovered, whose Lungs have been thus affected. All that I have seen to get over this dreadful Symptom. . . have by their perpetual Cough expectorated incredible Quantities of a tough whitish Slough from their Lungs, for a considerable Time together. And on the other Hand, I have seen large Pieces of this Crust, several Inches long and near an Inch broad, torn from the Lungs by the vehemence of the Cough, without any Signs of Digestion, or possibility of obtaining it.

This could not have been any disease other than diphtheria and obviously Dickinson must have seen many cases to write such an excellent description. His types three and five, however, are neither scarlet fever nor diphtheria, whereas type four is diphtheria of the skin. His sixth and last type is uncomplicated laryngeal diphtheria:

6. This Disease appears sometimes in the Form of a Quinsey. The Lungs are inflamed, the Throat and especially the Epiglottis exceedingly tumefied. In a few Hours the Sick is brought to the Height of an Orthopnœa; and cannot breathe but in an erect Posture, and then with great Difficulty and Noise. This may be distinguished from an Angina, by the Crustula in the Throat, which determines it to be a Sprout from the same Root with the Symptoms described above. In this Case the Patient sometimes dies in twenty-four hours. I have not seen any one survive the third Day. But thro' the Divine Goodness these Symptoms have been more rarely seen among us, and there have been but few in this Manner snatch'd out of the World.

Dickinson, trained for the ministry, had more clinical ability than most of the physicians of his time. He had the two diseases clearly separated in his mind, and was also aware of the difference in mortality. Concerning the second group of cases (diphtheria), he said that "all attempts to bring out the milliary eruptions seem in vain." In Boston, this would have been considered a confes-

sion of therapeutic ignorance. Unlike most of his contemporaries, he was ready to admit his limitations: "I have not yet found any effectual Remedy in the 6th and last Case described." Apparently his medical knowledge was acquired through independent and intelligent observation and if he had not attempted to square his facts with the accepted theories of the day, he would very probably have ended the confusion of scarlet fever with diphtheria and thus would have made a great contribution to the medical literature of the world. But unfortunately he, like William Douglass, insisted that the various types were different manifestations of one disease, which was naturally accompanied by a rash, and his first intention was "to bring out the Eruption as soon as possible." He saw patients who had both diseases at different times and he thought they were second attacks of the same disease, although he added: "I have never seen any upon whom the Eruptions could be brought out more than once."

In 1738, Dickinson went to Boston and talked with "several gentlemen" who were particularly interested in this epidemic. It cannot definitely be said that he met William Douglass, but it is more than probable that these two distinguished physicians actually met and exchanged ideas, since each reflects the influence of the other in their later works. In his first contribution to *Zenger's Weekly* in February, 1736, Dickinson did not include scarlet fever in his description, but in his *Observations* (1740), which were written after he had been to Boston, he embodies Douglass' opinion that scarlet fever and diphtheria were the same disease; he also frequently uses Douglass' term "Eruptive Milliary Fever." On the other hand, Douglass, in his *Practical History* (1736) describes chiefly scarlet fever and denies the possibility of a second attack, but in his letter to Colden (1739) he admits the frequency of "Second Seizures" and stresses the occurrence of diphtheritic croup,—ideas that may have been suggested by Dickinson. Both firmly believed in the "morbific matter" theory and in the importance of bringing out the rash.

Eighteenth century physicians had a good excuse for believing in the identity of the two diseases because, after all, the diseases are somewhat similar. Moreover, diphtheria is a disease that may become evident in many different ways. One patient may appear to have a simple "cold in the head"; another, some affection of the skin; and a third may suffocate within a few hours. Now, if a

single disease can manifest itself in so many different ways, is it faulty judgment to suppose that it might also cause a scarlet rash? The chief criticism, if any, is that both Dickinson and Douglass displayed the very human fault of confusing hearsay with fact. I do not think that Douglass would have confused the two diseases if he had actually observed the early New Hampshire cases. He was told about the New Hampshire disease and, without personal investigation, believed it was the same as the one in Boston. Similarly, I do not think that Dickinson would have included his "variety of types" in an all-inclusive whole if he had not been influenced by Douglass, or by someone else in Boston, who probably told him that the diseases were the same. Both men merely reflected the prevailing theories of their time. The identity of diseases originated long before the eighteenth century, and was in vogue even as late as 1796 when Charles Caldwell, a student at the University of Pennsylvania, inadvertently reduced the theory to absurdity in his graduating thesis upon "the original sameness" of water on the brain, membranous croup, and infantile diarrhea!

In relation to the New England epidemic, the important facts as told by Dickinson are: that an epidemic appeared in New Jersey in February, 1735, which was three months before the New Hampshire outbreak; that it was chiefly an epidemic of diphtheria; that this epidemic also was complicated by the presence of scarlet fever; and that the scarlet fever, like the scarlet fever in New England, was comparatively mild.

## XI

### COMMENT

> And yet we must such Notice take,
> That we may right Improvement make, . . .
>
> —An Elegy.

The reactions of different populations to various diseases often reveal important facts which help in the control of future epidemics, and for that reason a study of the "throat distemper" records may be worth while. In many respects this epidemic was unique. There had been epidemics of whooping cough, measles, smallpox, dysentery, and influenza in the colonies, but they were more limited in extent and time, whereas this epidemic extended over nearly all the inhabited regions of New England, lasted many years, and was supposed to have been a new disease on virgin soil. Moreover,

uncontrolled diphtheria epidemics do not occur today, and, one sincerely hopes, will never be observed again. Unfortunately for a scientific analysis, however, the "throat distemper" was a complicated epidemic. It has already been shown that it consisted of a scarlet fever and two separate diphtheria epidemics and, furthermore, that what the colonists thought was a new disease was probably nothing new at all. Therefore, although these records may not reveal any facts of very great importance, nevertheless, I believe they have some scientific value.

— 1 —

Whether or not diphtheria and scarlet fever existed in New England prior to 1735 has much importance in the interpretation of the records, so it is well to assemble all available evidence in an effort to arrive at some conclusion. The fragmentary history of those diseases does not allow one to say with certainty when each was first observed, and the available descriptions are often so brief that it is hazardous even to attempt a differential diagnosis. If either disease was mild it may have been present from earliest times and, like the common cold, mumps, and chicken pox, may not have seemed unusual enough to elicit comment. Also, the old records are often difficult to evaluate. Sometimes the accounts were noticeably exaggerated, as when the *New York Gazette* reported that the Coventry "throat distemper" was more mortal than the London plague; on the contrary, frightful epidemics sometimes received scant notice. There would be nothing known about the Haverhill epidemic, for instance, except for the Rev. John Brown,—the town records of that period are more concerned with such things as the rum distillery and the ferry and the boundary perambulations. In many other towns, the only evidence of an epidemic is concealed in the vital records which, of course, were never kept for statistical purposes. So it is mostly by chance that we know anything about colonial diseases and the proof that a disease existed often rests upon the most casual and indirect statements.

There is some evidence of a diphtheria epidemic throughout New England as early as 1659. According to Cotton Mather:[176]

[176] *Magnalia* (1702 edit.) Bk. IV, iii, 156. Danforth himself gives a slightly different version: "1659. 9$^{m}$ & 10$^{m}$. The Lord sent a general visitation of children by coughs & colds, of w$^{ch}$ my 3 children Sarah, Mary & Elisabeth Danforth died, all of y$^{m}$ within y$^{e}$ space of a fortnight." *N. Engl. Hist. & Geneal. Reg.*, 1880, xxxiv, 87. Whooping cough was also present in 1659 (Hull's Diary), but I do not believe that the two diseases were confused. Whooping cough was not as fatal as the "Bladders" and besides was not "unknown."

In *December* 1659, the (until then unknown) Malady of *Bladders in the Windpipe*, invaded and removed many Children; by Opening of one of them the Malady and Remedy (too late for many) were discovered. Among those many that thereby expired, were the Three Children of the Reverend Mr. Samuel Danforth . . .

Bladders or rattles in the throat or windpipe were the old terms for what is now called "croup" and so the Danforth children very probably had diphtheria which is generally the cause of the most serious form of croup. The Rowley records show some evidence of an epidemic during 1659-60 characterized by multiple deaths of children.[177] At about the same time, "Cynanche Trachealis," which was an old technical term for croup, was present in Connecticut and in 1662 the General Assembly declared a day of thanksgiving for deliverance from the affliction.[178] Josselyn[179] mentions in his description of New England:

Also they are troubled with a disease in the mouth or throat which hath proved mortal to some in a very short time, Quinsies, and Impostumations of the Almonds [tonsils], with great distempers of cold.

There were many deaths in New London during 1689 from a "Distemper of sore throats and ffeaver . . . the Like haveing not been knowne in ye Memory of man" but the exact nature of the disease is uncertain.[180] In 1693, Sir Francis Wheeler arrived at Boston with his fleet. He had left England on an expedition to drive the French from North America, but when he reached the West Indies the crew contracted some disease and the expedition failed. The epidemic continued aboard ship and on reaching Boston, the fleet was quarantined; nevertheless the disease gained a foothold in the town. Samuel Sewall and Cotton Mather both mention the event and subsequent historians have assumed that this disease was yellow fever, but the Rev. John Barnard says in his autobiography that he was a boy at that time and contracted the disease and that it was scarlet fever.[181] Not too much emphasis should be placed upon Barnard's boyhood recollections yet his use

[177] *First Book of Burialls of the Town of Rowley. Essex Inst. Hist. Coll.* v, p. 161.

[178] Quoted from Packard: *Hist. of Med. in U. S.* (1931).

[179] Josselyn: *Account of Two Voyages. Coll. Mass. Hist. Soc.* 1883, 3rd Ser., p. 333.

[180] Caulkins: *Hist. of New London.*

[181] *Coll. Mass. Hist. Soc.*, 3rd Ser., v, p. 181.

of the words "scarlet fever" may mean that the disease was known, at least, in 1693. The first reliable evidence of scarlet fever that I can find is Cotton Mather's mention[182] of a Boston epidemic in 1702. The same epidemic may have spread to other towns, for that year in Salisbury, a son of the Rev. John Pike died "after two days Relapse into a fever his principal malady was sore throat and caput-dolor."[183] Three of Mather's children had scarlet fever in 1704. "Throat Distemper" is supposed to have been present in Amesbury during the summer of 1706 when a Mrs. Weed and her three children all died on the same day, but the evidence is not convincing.[184] There was an epidemic in Connecticut during 1712 which may partly have been diphtheria, for in Woodbury two of Joseph Judson's children died "of a bladder in the throat as is supposed."[185] A childhood disease accompanied by multiple deaths was present in Mansfield (Conn.) during 1726-27, and about the same time in New London, a child of four years "died with a distemper in the throat."[186] During 1728-29, the Rowley records show an epidemic with multiple deaths and other characteristics of the throat distemper. There was a small epidemic of some virulent childhood disease in Braintree (Mass.) during 1730-31, which may have been either scarlet fever or diphtheria.[187] In nearby Dedham one or both of those diseases probably caused the trouble in the Rev. Samuel Dexter's family:[188]

Dec$^{r}$ 10$^{th}$ 1729, ab$^{t}$ this Time all three of my Children were visited with y$^{e}$ Quincey—two of them very bad, but y$^{ey}$ were none of 'em delivered over unto death . . . Nov. 5$^{th}$ 1731. My third Son, John, Dyed ab$^{t}$ 6 of y$^{e}$ Clock in y$^{e}$ Evening, after a few Days very distressing Indisposition, being taken so very ill on y$^{e}$ Tuesday & dyed on y$^{e}$ fryday following of y$^{e}$ Canker, &c. He was a most pleasant & Desireable Child. . . Feb$^{ry}$ 2d 1734-5, at ab$^{t}$ ½ hour past four in y$^{e}$ Morning, Died of y$^{e}$ Squinancy, my Dear & only Daughter, Catherina, aged sixteen Months & five Days. She was a very pleasant & Desireable Child, & had a very Awful & Shocking Death. . .

In Norwich, diphtheria may have caused the deaths of Benjamin Lothrop's three children in December, 1732; the same disease was

[182] *Diary of Cotton Mather. Coll. Mass. Hist. Soc.*, 7th Ser., pp. 446, 454.
[183] *Coll. New Hamp. Hist. Soc.*, iii, p. 43.
[184] Joseph Merrill: *Hist. of Amesbury.* 1880, p. 157.
[185] Barnes: *Mortality Record of Woodbury.* 1898.
[186] *Diary of Joshua Hempstead.* Published by the New London Hist. Soc.
[187] Samuel A. Bates: *Records of the Town of Braintree*, p. 729.
[188] *Samuel Dexter's Diary.* loc. cit.

present in the Stratfield Society (Bridgeport) during October, 1733, when Eunice Beardslee and Edward Burrows both died "of y^e^ Bladder aged 1 year."[189] In the "throat distemper" records we find lay writers frequently mentioning scarlet fever, which can be taken as indirect evidence that that disease had been very common before 1735. The newspapers reported scarlet fever at Ipswich; Douglass said that some of the New Hampshire cases were "called a scarlet fever"; and John Brown mentioned scarlet fever in connection with some Haverhill deaths. At each occurrence it was not described as a new disease but merely mentioned in terms which indicate that the public must have been very familiar with it.

In summary, we can be certain that diphtheria was present in the colonies for many years and sometimes in serious epidemic form, particularly in Massachusetts and Connecticut, but not enough records are available to make definite statements about its presence in New Hampshire. Scarlet fever was present, certainly in Massachusetts and probably in New Hampshire, but I have found no early records of it in Connecticut. Its relative mildness may be the probable explanation for its being seldom mentioned. It may have become more fatal during 1735-40, but even then it was mild in comparison with diphtheria and, except as a cause of diagnostic confusion, was not a major factor in the "throat distemper" epidemic.

— 2 —

The previous existence of diphtheria may partly explain the different death-rates in the separate provinces:

| *Province* | *Estimated population*[190] | *Epidemic years* | *Total deaths* | *Deaths per 1000 population* |
|---|---|---|---|---|
| New Hampshire | 20,000 | 1735–36 | 1,000 | |
| | | 1736–40 | 500 | 75.0 |
| Maine | 9,000 | 1735–40 | 500 | 55.5 |
| Massachusetts | 130,000 | 1735–40 | 2,000 | 15.4 |
| Connecticut | 63,000 | 1735–40 | 1,000 | 15.8 |
| | 222,000 | | 5,000 | 22.5 |

The New Hampshire death-rate is based upon Fitch's figures and also upon the easily proven fact that the epidemic continued

[189] Ms. records in Conn. State Library.

[190] Estimates from Damon's *American Dict. of Dates.* Boston, 1921, Vol. i.

long after the "Account" was published, not only in the frontier towns but also in Portsmouth and its vicinity. The deaths can be attributed almost entirely to diphtheria. On account of geographical proximity, time relation, and the frequency of multiple deaths, the Maine epidemic was very probably a continuation of the New Hampshire one and therefore an epidemic of diphtheria also, even though specific disease descriptions are not available. The number of deaths, included here merely for completeness, is taken from Williamson, who probably did not use actual statistics but made estimates based upon comparative populations and Fitch's records of New Hampshire deaths. The Massachusetts epidemic, as has been said, was very complicated and many deaths were caused by scarlet fever. It has been estimated that there were 1400 deaths in Essex County alone and 2000 deaths in the whole province, which I believe are the minimum figures, but since it is impossible to estimate the scarlet fever deaths, the Massachusetts figures are therefore disregarded. The reasons for attributing most of the Connecticut deaths to diphtheria have been given elsewhere. The search for records of an epidemic in Rhode Island has been unsuccessful.[191] Connecticut and Massachusetts towns near the Rhode Island boundaries (Groton, Stonington, Killingly, Uxbridge) were not involved until 1740 or later, so Rhode Island was probably not involved until a later date. In 1738, the Rhode Island laws concerning contagious distempers were modified but that may have been merely a precautionary measure.

To simplify the present discussion, only New Hampshire and Connecticut are compared. In proportion to population, the New Hampshire epidemic was a great deal more severe; according to the figures there were five times as many deaths. The difference becomes apparent also by comparing the separate towns. In very few Connecticut towns was the mortality as great as that in Durham,

[191] Between May 10 and June 7, 1736, the widow Carey of Bristol lost six children; and there were two deaths in Capt. Lawton's family during July. See: *Vital Records of Rhode Island 1636-1850*, Vol. v, 122. Also: *Boston News-Letter*, May 27-June 3, 1736. I can find no other evidence of an epidemic. John Walton in *The Religion of Jesus Vindicated* (1736, p. 26) says: ". . . His Rod has had a loud Voice in New-England this last Year; Oh! How many have been suddenly called into the eternal World by a late raging Distemper, and especially among young People?" This does not necessarily refer to Rhode Island, although the author practised medicine there. Walton also mentions in a letter, dated 1744, that the "throat distemper" was present in Glocester, R. I.

Gravestones of the children of Samuel and Mary Upham;—Phebe, Abigail, William, and Marcy,—who died between August 15 and September 14, 1738. Malden, Mass.

Gravestones of Mrs. Martha Gott and her five children,—Nathaniel, died October 29; Rebekah, died November 14; Martha, died November 15; John, died November 29; Josiah, died December 5, 1737. Wenham, Mass.

Gravestones of the children of Joseph and Rebeckah Moor;—Ephraim, aged 7, died June 15; Hannah, aged 3, died June 17; Jacob, aged 11, died June 18 (all three buried in one grave); Cathorign, aged 2, died June 23; Rebeckah, aged 6, died June 26; and Lucy, aged 14, died August 22, 1740. Lancaster, Mass. Old Common Burial Ground.


Gravestones of Mrs Margarit Holyoke and of William Holyoke.
Cambridge, Mass., 1740.

Gravestones of Elizabeth and Mary Bayley.
Haverhill, Mass., May, 1736.

Gravestone of David Greley, who died June 20, 1735, aged 11 years. One of the first victims of the epidemic. Kingston, N. H.

Gravestones of Stephen Mix, aged 9, died May 21, 1736; and Mary Mix, aged 4, died June 11, 1736. New Haven, Conn.

Hampton Falls, Kingston, or Rye and one gathers the impression from contemporary comments and the somewhat greater frequency of multiple deaths that, regardless of any figures, the New Hampshire epidemic caused more destruction. This marked difference in mortality can be explained in at least two ways. First, contrary to contemporary opinion, it now appears that the Connecticut epidemic was not an integral part of the epidemic that began in Kingston. The Connecticut epidemic appeared in Stamford and towns along the shore and later spread to the northeast corner of the colony. In other words, it spread towards Massachusetts and New Hampshire, whereas if New England was involved in a single epidemic the course should have been in the opposite direction because epidemics usually spread away from the original source. So, unless we adopt the explanation that the disease was carried from the "Eastward" towns around Cape Cod to the towns on the Connecticut shore, it seems necessary to assume that the Connecticut epidemic either was a part of the New Jersey epidemic, or, like the one in New Jersey, had an independent origin. If the Connecticut disease was caused by a less virulent type of diphtheria, the difference in mortality can be readily explained.

It is also possible to explain this difference in mortality on the basis of a difference in immunity. The history of diphtheria in New England prior to 1735 suggests that the disease had been more common in Connecticut and this may have had a lasting effect upon the population. Recent laboratory experiments indicate that the progeny of mice that have recovered from certain diseases are more resistant to the same diseases than are the progeny of unselected mice[192] and therefore the Connecticut children may have been more immune because of inheritance. Moreover, it is supposed that the proportion of immune subjects in a given population varies with the incidence of the disease, and, if it can be assumed that diphtheria was common in Connecticut and uncommon in New Hampshire, the difference in mortality can again be readily explained. But it is not at all certain that diphtheria was uncommon in New Hampshire before this epidemic. The absence of records does not mean the absence of the disease; nevertheless, the assumption that there were immunity differences among various populations seems to be justified on other grounds. Throughout the whole history of the "throat distemper," one finds evidence that the disease was more fatal in

[192] L. T. Webster. *Experimental Epidemiology. Medicine*, 1932, xi, 321.

the smaller frontier towns. In proportion to their populations, Kingston and Durham suffered more than Exeter; Hampton Falls more than Hampton; Rye and the Shoals more than Portsmouth; Byfield more than Newbury; Coventry and Simsbury more than Hartford; East Haven more than New Haven; and so on with other groups of towns. With the exception of Haverhill and Kittery—two old established towns with frightful epidemics—the smaller frontier towns generally bore the brunt of the attack. Epidemiologists have observed a difference in the reactions of rural and urban populations to disease and though it should be remembered that all of these towns possessed rural populations and the only essential differences were in size and age, some similar difference in population reactions seems to have been present. If it can be assumed, for instance, that diphtheria had been constantly present in the old established towns, even in New Hampshire, and had left some immunity effect, we have a possible explanation for the various differences in mortality. Connecticut at that time possessed more old established towns and was less of a frontier colony than was New Hampshire.

Whatever the explanation for this difference in mortality is probably the explanation also for another striking feature of the epidemic—the absence of a devastating diphtheria epidemic in Boston. This is one of the most difficult phases of the "throat distemper" to explain. The Boston epidemic of 1735-36 was scarlet fever and therefore not pertinent to this discussion. It will be recalled that between 1735 and 1740 the "Eastward Distemper" slowly advanced towards Boston and actually reached some of the surrounding towns—Marblehead, Malden, and Cambridge—but no evidence of any great diphtheria epidemic in Boston itself has come to light. Certainly there was ample contact with the "Eastward," for almost every New England diarist tells of frequent visits, and there are numerous records of whole families moving into the chief trade center of the colonies. It will also be recalled that some of the country towns lost from one-third to one-half of their children and if Boston had suffered to the same degree, three or four thousand children would have lost their lives. The people had ample reason to be fearful, but nothing like that occurred. What is the explanation? Those who believe that the "throat distemper" was an epidemic of a single disease might argue that the New Hampshire disease was scarlet fever and therefore one could not expect to

find a second Boston epidemic, but I believe there is too much contemporary evidence against this view, and besides, even on these grounds one has to assume the presence of some immunity difference to explain the lower Boston death-rate. It might also be argued that my Boston facts and figures are incomplete and that Boston may have experienced a serious diphtheria epidemic. If that were true it would seem that William Douglass, ever on the alert for new and unusual diseases, would surely have left us an account. A few of his remarks can be construed as favoring diphtheria, but there is no ground for the belief that he saw more than sporadic cases. Moreover, I can find no evidence of diphtheria in Roxbury or Medford, towns near Boston, and even in Dorchester, Lynn, Salem, and Watertown, where there is some slight evidence of the disease, one can find no great epidemics comparable to the epidemics in the New Hampshire towns. It is possible that Boston and the larger surrounding towns escaped simply because they were on the fringe of the epidemic and we know that epidemics do have geographical limits although they are not so easy to explain. All in all, however, the most plausible reason for this absence of a large diphtheria epidemic in Boston is that there was a relative immunity as a result of the endemic presence of the disease before 1735. There are not many historical facts to support such an assumption, but John Walton's *Essay on the Rattles* (Boston, 1732) may be mentioned here. This essay, with its quaint theories of disease, though not written in Boston, can be taken as indirect evidence that diphtheria had been frequently observed in many New England towns, and perhaps, as the records are more thoroughly searched, some other more convincing evidence will be found. But it would be unwise to insist that a possible difference in immunity was the true explanation for the differences in mortality in the separate provinces until there are more substantial facts on the medical history of each town. In a complicated subject such as this, where population changes, diet, inheritance, and many other factors are involved, one must be content merely to offer theories and not attempt to offer proof.

— 3 —

Why a diphtheria epidemic occurred in Kingston in 1735, or what may have been the original cause of the "throat distemper," is another question not so easily answered. The early colonists had many explanations. The sick pig in Kingston, the default of

ministers' salaries, the mortally infected air, Original Sin, dead caterpillars, God's Holy Anger, and various other causes were considered at different times, but because modern science is still uncertain about many things concerning epidemics, we cannot dismiss all their theories with a haughty smile. Even our latest theories are constantly being challenged by the accumulation of new facts and some of the science of today may easily become the quaint and ridiculous folk-lore of tomorrow.

Possible explanations again depend somewhat upon whether or not diphtheria had been prevalent in New Hampshire. The supposition that it was a new disease would correspond with the fact that no clinical evidence of the disease has been found, particularly in Kingston where the epidemic began, but that is not proof that diphtheria did not exist. At that time, however, there was a firm belief that "there never was y$^{e}$ like Before in this Country" and over and over again the opinion was everywhere expressed that it was a new disease. But diphtheria has frequently been described as a new disease in other, more recent, epidemics and so the popular contemporary opinion is no proof of scientific fact. Therefore, one cannot be certain that diphtheria was a new disease in Kingston and the other frontier towns; the most that can be said is that these towns had not previously experienced such a malignant epidemic.

On the other hand, there is some other indirect evidence that diphtheria was not a new disease in New Hampshire. As pointed out above, Dover, Exeter, Hampton, and Portsmouth, the four oldest towns, seemed to have fewer deaths in proportion to their populations than had the smaller outlying towns, and if this difference can be attributed to a difference in population immunity, then diphtheria was probably endemic in the oldest towns. Moreover, Fitch's figures reveal the very significant fact that ninety-six per cent of the deaths were among children under twenty years of age. This age distribution is similar to that found today with certain diseases such as whooping cough, chicken pox, and measles. These diseases do not attack children because of any special predilection for a particular age group, for when they occur on islands where there is little contact with the civilized world, all ages are attacked; and even in seventeenth century New England, when measles epidemics were infrequent, the disease attacked adults as well as children. However, in most populations where there is intimate social contact, these diseases attack only the children because the adults

are immune, this immunity having been acquired as the result of earlier infection. But many adults are immune to diphtheria when there is no apparent history of previous infection and hence it has been assumed that these persons must have had subclinical or very mild infections of which they were unaware. Lately, however, the question has arisen whether or not diphtheria immunity is acquired solely by previous exposure to the disease. It has been found that the Eskimos are naturally immune without apparent prior contact,[193] and Jordan[194] has found that some animals approaching maturity show blood reactions which indicate that they acquire immunity against diseases to which, so far as is known, they have never been exposed. On this theory, Fitch's figures would be explained as a natural growth process, and independent of exposure to diphtheria. Nevertheless, the weight of opinion at the present time is that adult immunity to diphtheria results only from contact with diphtheria toxin and the conclusion seems warranted that, in spite of no history of diphtheria in Kingston, the disease must surely have been present in a mild form at least.[195]

Inasmuch as there is some difference of opinion, let it be merely supposed that diphtheria was actually unknown in Kingston, and that a malignant type was carried in from some other infected town. Perhaps some travelling "pedalar," visiting relative or friend, or perhaps some one of the families that moved into town and entered intimately into church and social life, served as a carrier of the disease. We are certain that most of the Kingston children had no immunity. The powder was dry and only a spark was needed for an explosion.

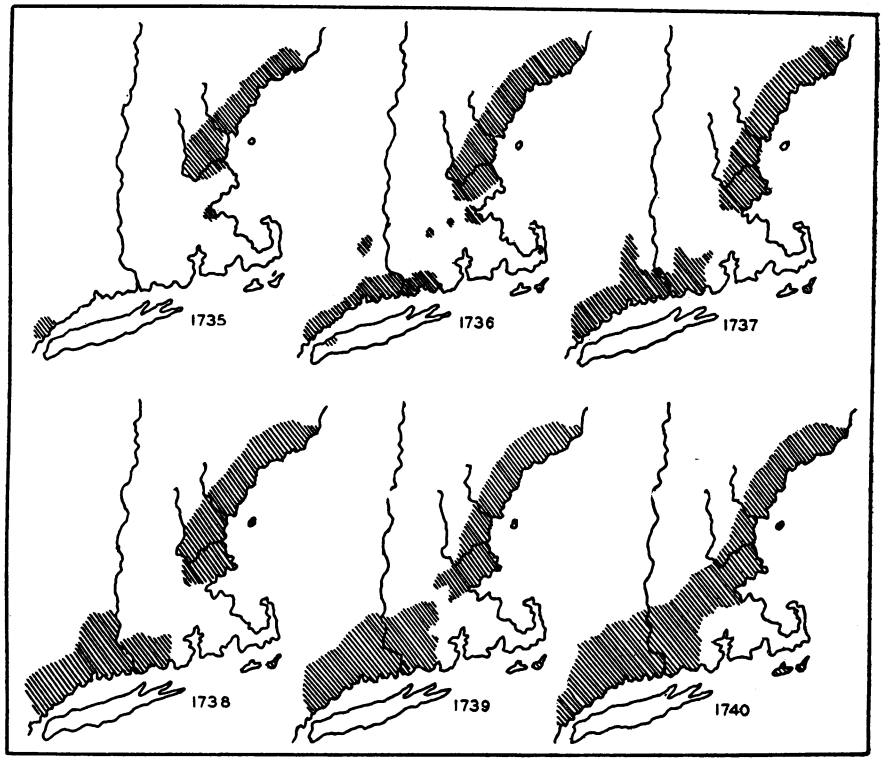
This theory adequately explains the Kingston facts and also the subsequent spread throughout New Hampshire. The time element in the progress of the epidemic is compatible with the supposition that each town received its initial infection from a neighboring town or from Kingston, the original source. Indeed, if all the facts were

[193] Literature quoted by P. H. Harmon. *Amer. J. Dis. Children.* 1934, June, p. 1224.

[194] E. O. Jordan. *Proc. Exper. Biol. & Med.*, xxx, 446.

[195] There were about fifteen or twenty deaths among children in the autumn and early winter of 1730, with about two to six deaths each month. Two of Jedidiah Philbrick's children died in September; two of Thomas Dent's children died in December; there were no other multiple deaths. These findings are compatible with a mild diphtheria but could also be explained on the basis of a dysentery or smallpox epidemic. There are no available clinical descriptions.

known, especially about contacts with healthy carriers, this theory might explain the spread to Maine and Massachusetts. But it does not explain the origin of a similar epidemic at nearly the same time in the Newark Mountains of New Jersey, for it does not seem likely that the two epidemics arose from a single source. At that time, overland travel was difficult; there was only one regular coach




The progressive spread of the epidemic during the years 1735 to 1740 from the two foci, one in Connecticut, the other in New Hampshire.

between Boston and New York, and most long trips were made by water. If the two epidemics had first appeared in seaport towns, some direct relation might be suspected, but, as it happened, both began in isolated inland towns. There was considerable migration from New Hampshire and Connecticut to New Jersey but the disease appeared in New Jersey first. Therefore, it is probable that the two epidemics were independent. Furthermore, there is some evidence, as yet unconfirmed, of a similar malignant diphtheria epi-

demic occurring in the West Indies at the same time that the "throat distemper" appeared in New England.[196] So the various epidemics are not easily explained on the assumption that the disease was carried from previously infected areas unless an unusual coincidence is assumed.

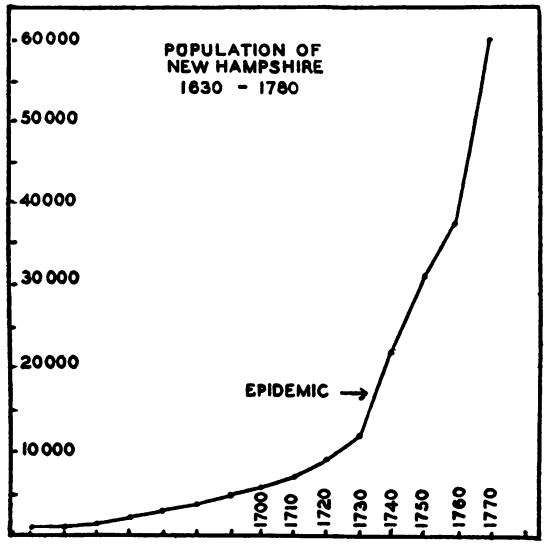
Thus, we are led to consider the possibility that diphtheria was already present in Kingston and in New Jersey and that during the spring of 1735, and for some unexplained reason, the organism suddenly underwent some change and took on an added virulence and infectivity. This theory finds some support in our experience with other epidemics and is related to the so-called cyclic variation in virulence of diseases. Smallpox today is supposed to be milder than was the smallpox of the eighteenth century, and scarlet fever, influenza, and measles are thought to vary in virulence from time to time. By far the best evidence that diphtheria became more virulent about 1735 is found in the *Vital Records* of almost every New Hampshire and Massachusetts town. At that period one can find hundreds of instances of multiple deaths, whereas, before then, multiple deaths were very infrequent and most of those that have been found can be accounted for by dysentery and smallpox. This sudden increase in multiple deaths is so striking that I have used it as evidence of the "throat distemper" in some few towns where other records could not be found. That it was a new and unusual experience for the colonists is also shown by that notice in the *New York Gazette* which said that the burial of four Boynton children in one grave was an event "seldom known in this part of the world." We can understand how the colonists may have failed to mention sporadic cases of diphtheria and how they may have confused various types of disease, but a disease that frequently killed from three to eight children in a family within about a month was not likely to be quickly forgotten. And so it seems that this sudden marked increase in the occurrence of multiple deaths can be taken as evidence of an increased virulence in diphtheria which, if true, would be a reasonable explanation for the epidemic. The only experimental evidence bearing on this point, however, seems to contradict this conception of the cause of an epidemic. Webster,[197] while studying experimentally produced epidemics among mice, could

[196] William Douglass: *Practical History* . . . p. 13. *Boston Weekly Post Boy*, Aug. 30, 1736.

[197] L. T. Webster: loc. cit.

find no evidence that an organism varies in virulence before, during, or after an epidemic, and his results seem to show that explosive epidemic outbreaks may result from changes in dosage of the organism or from changes connected with the host. Therefore, however apparent the increased virulence of diphtheria during 1735 may seem, we cannot be certain of such a simple explanation.

Another possibility to be considered is suggested by other results in experimental epidemiology. It has been found that among groups of mice that were previously infected with certain organisms, recurrent epidemic waves could be produced merely by adding susceptible mice to the infected community at a constant rate.[198] The epidemics which occurred when the proportion of immigrants reached a certain level were very similar to natural epidemics. Now, if it is supposed that diphtheria was present in New Hampshire before 1735, the conditions are somewhat analogous to those in the experiments with mice. Perhaps it was merely coincidental, nevertheless, the New England and New Jersey epidemics happened to occur immediately following the start of a rapid growth in population. This relation as it concerns New Hampshire is illustrated in the graph and similar graphs could be drawn for the other colonies. Moreover, this was a period of land speculation and the population increases naturally occurred in frontier towns where land was more easily obtained. Perhaps by 1735 this population increase was just enough to upset the balance between immunized and unimmunized subjects and an epidemic was the result. The populations of the other provinces were also rapidly increasing at the same time and therefore the apparently




The relation of the occurrence of the epidemic to the growth in population. Compiled from statistics in *American Dictionary of Dates*, by C. L. Damon. Boston, 1921, vol. 1.

[198] Greenwood and Topley: Quoted by Webster.

independent but simultaneous diphtheria epidemics can possibly be explained.

This conception of the outbreak of diphtheria finds additional support in the circumstances surrounding some other epidemics. If the development of the New England frontier was attended by epidemics of diphtheria it would be interesting to know if the development of other American frontiers was also attended by similar epidemics. I cannot offer very much scientific evidence, but it is probably more than a coincidence that such epidemics did actually occur when the American frontier was extended beyond the Alleghanies. In Drake's account of *The Principal Diseases of the Interior Valley of North America*[199] we find descriptions of epidemics among the first settlers of Kentucky and Ohio in 1791 and 1793; and in Paris, Kentucky (1821), St. Clairsville, Ohio (1833), Greene County, Ohio (1838-40), and St. Louis (1845), there were severe epidemics of "malignant sore throat" which were very similar indeed, even to the very high mortality and the frequency of multiple deaths, to the "throat distemper" of New England in 1735. But here again, our facts are too few to warrant definite conclusions and we must leave a very interesting subject with merely theoretical explanations.

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[199] Daniel Drake: *A Systematic Treatise.* Phila., 1854, pp. 594-95.